



ACADEMIC YEAR
2023-2024

**PROFESSIONAL DEVELOPMENT TRAINING
PROGRAMS ORGANIZED BY THE
INSTITUTION FOR TEACHING STAFF**



ACADEMIC YEAR 2023-2024

6.3.3 Professional development training programs organized by the institution for teaching staff

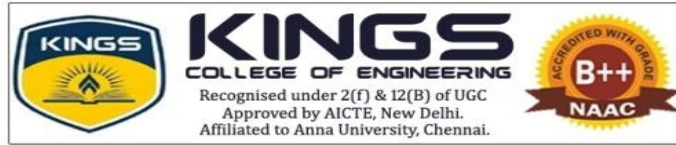
S. No	Department	Program Count	Beneficiary Count	Page No.
1	B.E – Civil Engineering	07	45	02-32
2	B.E – Computer Science and Engineering	08	115	33-75
3	B.E – Electronics and Communication Engineering	02	17	76-83
4	B.E – Electrical and Electronics Engineering	04	45	84-110
5	B.E – Mechanical Engineering	09	105	111-141
6	Training and Placement	01	27	142-146
7	IQAC	01	65	147-151
TOTAL			419	

K. Alameer
14/8/24
IQAC Coordinator

J. Muthu
14/8/24
Principal
Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303

**DEPARTMENT OF CIVIL
ENGINEERING**

**ACADEMIC YEAR
2023-2024**



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2023-2024

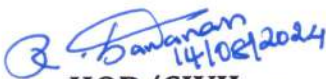
INTERNAL STAFF SEMINAR




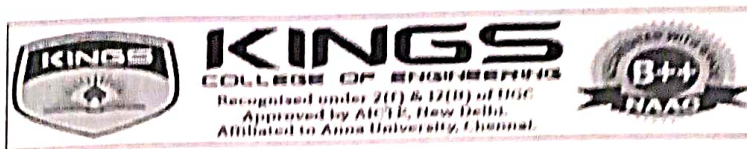
DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024
INTERNAL STAFF SEMINAR SUMMARY

S.NO	DATE	TITLE	STAFF NAME	NO. OF PARTICIPANTS
1.	17.08.2023	Internal seminar on "Wireless sensor networks for bridge structural health monitoring: A novel approach".	Mr.K.Arun, AP/Civil	06
2.	19.02.2024	Internal staff seminar on "The use of <i>Robiniapseudoacacia</i> L fruit extract as a green corrosion inhibitor in the protection of copper-based objects".	Mr.D.Nandakumar, AP/Civil	08
3.	23.02.2024	Internal staff seminar on "Transforming the civil engineering sector with generative artificial intelligence" on 23.02.2024.	Ms.K.Kanimozhi, AP/Civil	06
4.	04.03.2024	Internal staff seminar on "Guided approach for utilizing concrete robotic 3D printing for the architecture".	Ms.A.Suganya, AP/Civil	05
5.	06.03.2024	Internal staff seminar on "Effects of Corn Cob Ash as Partial Replacement of Cement".	Mr.K.Sriram Gopal, AP/Civil	07
6.	08.03.2024	Internal staff seminar on "Cellular concrete:Utilization of plastic and glass waste as a replacement of fine aggregate".	Mr.A.Sagaya Albert, AP/Civil	07
7.	14.03.2024	Internal staff seminar on "Advancements in sensors and actuators technologies for smart cities: A comprehensive review".	Mr.K.Arun, AP/Civil	06


14/08/2024
FACULTY INCHARGE


14/08/2024
HOD/CIVIL
Dr. R. Saravanan
HOD - Civil
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303


14/8/2024
PRINCIPAL
Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303



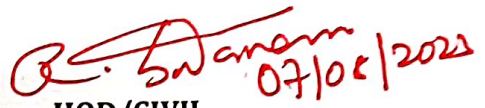
DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024
CIRCULAR

DATE: 07.08.2023

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mr.K.ARUN
Date : 17.08.2023
Venue : Smart classroom (Hall no 236)
Time : 12:30 PM


DRC MEMBER 07/08/23


HOD/CIVIL 07/08/2023



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/ODD SEMESTER
INTERNAL STAFF SEMINAR - REPORT

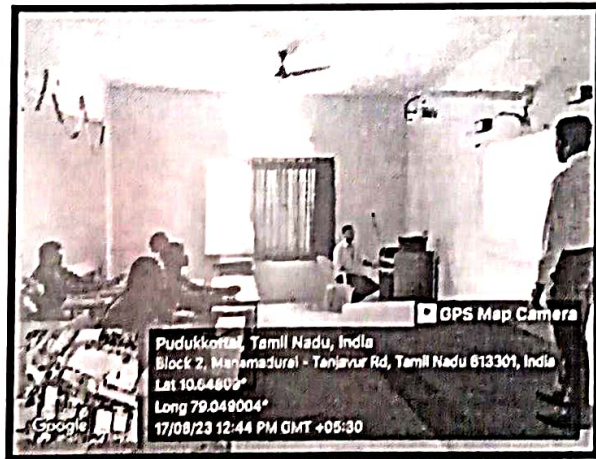
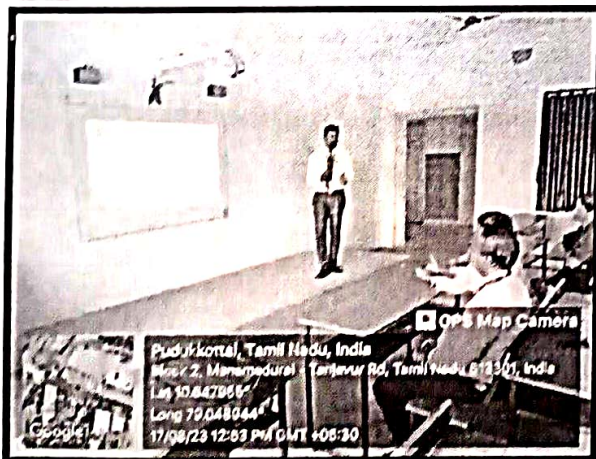
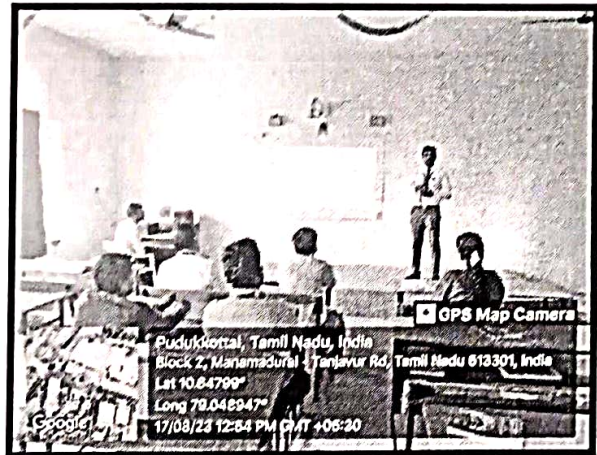
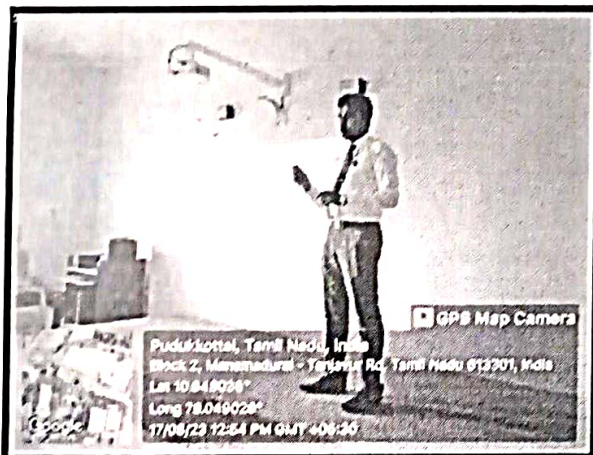
18/08/2023

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 17th August, 2023 at 12:30 PM. Mr.K.Arun /AP delivered his seminar talk on "Wireless sensor networks for bridge structural health monitoring: A novel approach". The paper was referred from SPRINGER Journal, Asian Journal of Civil Engineering (2023).



Internal Seminar Session by Mr.K.Arun /AP CIVIL

Theme:

This work presents the ML model in which data collected from the open access repository where experiments conducted on steel structure bridge data for 1-year duration are analyzed. The model combines data from sensors, applications statistics and induced load while monitoring structure. Experiments conducted have tested the ambient vibration test, explored different load condition for vibration test, and artificial damage conditions on bridge structure at different positions to collect enough data for real-time analysis at different environment condition. Five different damage scenarios were considered as a case A with no damage, in case B the vertical section was cut half at the mid-span, case C with fully cut mid-span, in case D damage was recovered by welding the vertical section, in case E 5/8th part of vertical section was cut. Ambient and load-induced vibration data are structured based on different cases using panda's data frame. The model shows the high accuracy of deformation caused due to load induced. Results show accelerometer measurement as very good feature vectors for real-time monitoring and SARIMAX as a perfect model to evaluate time series data and perform anomaly detection simultaneously.

Scope for future work:

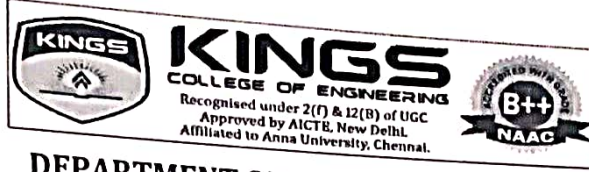
- Here, the author has proposed the design architecture of the major components required in building a smart SHM system.
- This proposal can be extended and verified in real-time by considering certain structural health monitoring aspects.
- On the proposed model, wireless communication is used to transmit. However, latency of data transmission has been largely ignored. Hence future works can focus on that.

Outcome:

The Seminar clearly highlighted the machine learning anomaly detection using SARIMAX forecasting method. Staff members also got an idea about the proposed model from remote sensor network installed on steel truss bridge for continuous monitoring. This seminar proves to be effective in such a way that, it highlighted the model of SHM system. The future of the SHM system lies in the incorporation of Information Technology and Artificial Intelligence into the traditional health monitoring systems. Discussions were made among faculty members in various aspects of composite beams. Finally, Staff members shared their views regarding seminar and gave their valuable feedback.


HOD/CIVIL 15/05/2023


15/05/2023
PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING
INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

17/08/2023

S.NO	NAME	FEEDBACK	SIGN
1	Dr.R.Saravanan	Very Excellent Presentation	R. Saravanan 17/08/2023
2	Mr.R.Sundharam	New topic and Usefull presentation	R. Sundharam 17/08/2023
3	Mr.R.Ramchandar	Innovative Trendy Topic	R. Ramchandar 17/08/2023
4	Mr.D.Nandhakumar	Excellent session. queries are clearly Explained Interested interactions.	D. Nandhakumar 17/08/2023
5	Ms.A.Suganya	Effective & interactive presentation	A Suganya 17/08/2023
6	Mr.A.Sagaya Albert	Nice presentation	A Sagaya Albert 17/08/2023

Kings College of Engineering, Punalkulam



DEPARTMENT OF CIVIL ENGINEERING

ACADEMIC YEAR 2023 - 2024

CIRCULAR

DATE: 16.02.2024


This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.


Name of the faculty : D.NANDAKUMAR.

Date : 19.02.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


DRC MEMBER 16/02/2024


HOD/CIVIL 16/02/2024

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR - REPORT

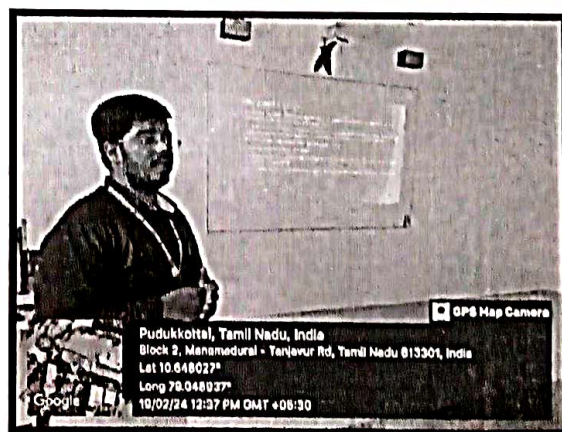
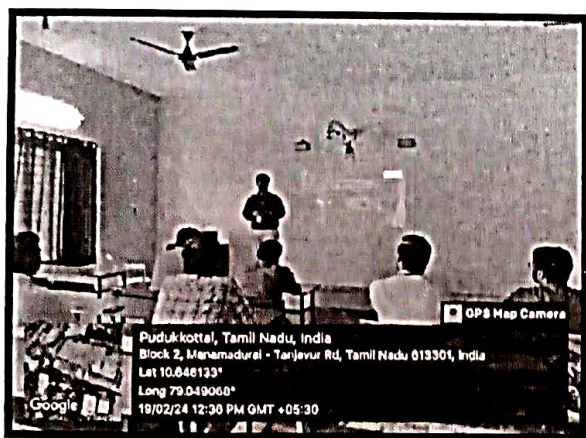
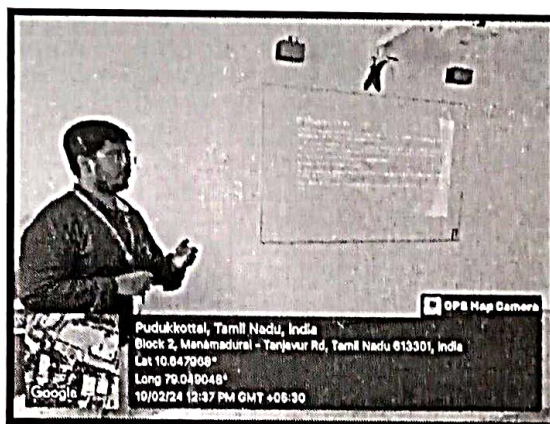
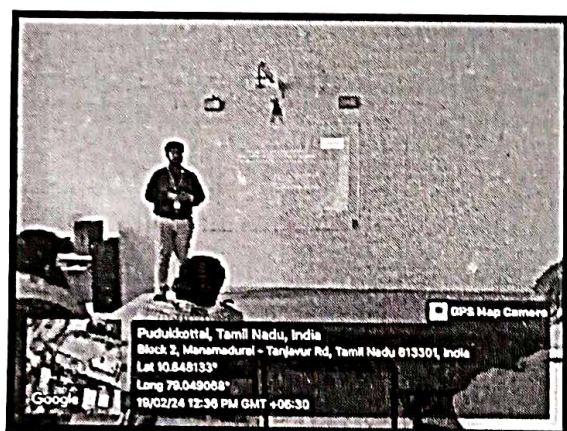
19/02/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 19th February, 2024 at 12:30 PM. Mr.D.Nandakumar/AP delivered his seminar talk on “The use of *Robiniapseudoacacia*L fruit extract as a green corrosion inhibitor in the protection of copper-based objects”. The paper was referred from SPRINGER Journal, Heritage science(2021).



Internal Seminar Session by Mr.D.NANDAKUMAR /AP CIVIL

Theme:

This work presents the the acacia fruit extract (200 ppm to 1800 ppm) was used to the prevention of corrosion inhibition of bronze alloy in corrosive sodium chloride solution 0.5 M, for 4 weeks consecutively. The Bronze alloy used in this research, was made based on the same percentage as the ancient alloys (Cu-10Sn). $I_E\%$ was used to obtain the inhibitory efficiency percentage and R_p can be calculated from the resistance of polarization. SEM-EDX was used to evaluate the surfaces of alloy as well as inhibitory. The experiment was conducted in split plot design in time based on the RCD in four replications.

Scope for future work:

- The use of this type of green inhibitors allows low-cost carbon steel to be used as a structural material.
- These corrosion inhibitors are prevent the corrosion in the way of eco-friendly.
- The alternative solution for the toxic with more costly inorganic inhibitors in future.

Outcome:

- The Seminar clearly highlighted the comparison of test results has been done through the corrosion studies (weight loss, Half-cell, Accelerated corrosion test), surface studies (SEM, EDX, AFM test) and spectroscopic studies (FTIR test).
- These test results show the formation of the Inhibition thin layer above the steel surface that contains S, N, O and P as well as phytochemical Compounds like alkaloids, tannins, flavonoids and steroids.
- Finally, Staff members shared their views regarding seminar and gave their valuable feedback.


R. Sandarum
29/02/2024.
HOD/CIVIL


J. D. D. D.
24/2/2024
PRINCIPAL

19/02/2024



DEPARTMENT OF CIVIL ENGINEERING

INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

S.NO	NAME	FEEDBACK	SIGN
1	Dr.R.Saravanan	Excellent presentation	<i>R. Saravanan</i> 19/02/24
2	Mr. R.Sundharam	Nice presentation	<i>R. Sundharam</i> 19/02/24
3	Mr.K.Arun	Innovative topic with good explanation	<i>K.Arun</i> 19/02/24
4	Mr.R.Ramchandrar	Good presentation	<i>R. Ramchandrar</i> 19/02/24
5	Mrs.A.Suganya	Informative presentation	<i>A. Suganya</i> 19/02/24
6	Mr.A.Sagaya Albert	Very good presentation with informative content	<i>Sagaya Albert</i> 19/02/24
7	Mr.K.Sriram gopal	Good communication skills, presentation was Excellent	<i>K. Sriram gopal</i> 19/02/24
8	Mrs.K.Kanimozhi.	Good presentation with innovative content	<i>K. Kanimozhi</i> 19/02/24

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024

CIRCULAR

DATE: 19.02.2024

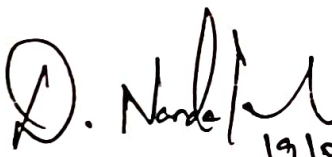
This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.


Name of the faculty : Mrs.K.KANIMOZHI

Date : 23.02.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


19/02/2024
DRC MEMBER


19/02/2024
HOD/CIVIL

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER

INTERNAL STAFF SEMINAR - REPORT

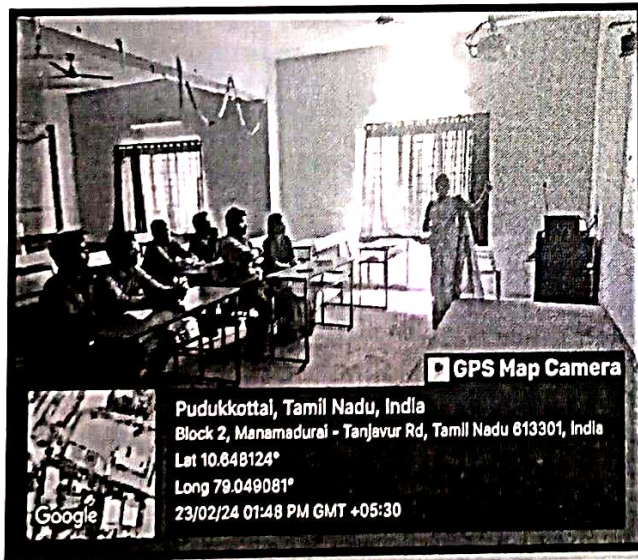
23/02/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, ELSEVIER etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 23rd February, 2024 at 12:30 PM. Mrs.K.KANIMOZHI/AP delivered his seminar talk on "Transforming the civil engineering sector with generative artificial intelligence". The paper was referred from ELSEVIER Journal, SSRN(2024).



Internal Seminar Session by Mrs.K.KANIMOZHI /AP CIVIL

Theme:

This work presents the The infusion of generative artificial intelligence (AI) stands out as a transformative influence in civil engineering, reshaping conventional methodologies and

elevating the effectiveness and precision across various domains. This study delves into the nuanced impact of ChatGPT, a potent language model, in key realms within civil engineering: Structural Engineering, Geotechnical Engineering, Transportation Engineering, Environmental Engineering, Water Resources Engineering, Urban and Regional Planning, Materials Engineering, Coastal Engineering, and Earthquake Engineering. Within Structural Engineering, ChatGPT assumes a central role in formulating and refining structural designs. By deciphering intricate engineering concepts and proposing inventive solutions, ChatGPT assists engineers in crafting structures that not only exhibit resilience but also optimize resource utilization. Its proficiency in scrutinizing extensive datasets and delivering insights positions it as an invaluable tool for augmenting structural integrity and safety.

Scope for future work:

- ✚ By using GenAI we can develop software for each and every stage of construction management.
- ✚ In future, the improvement of AI will lead to save more time and ensure safety at most.
- ✚ Accuracy of the project can be predicted earlier by using AI software.

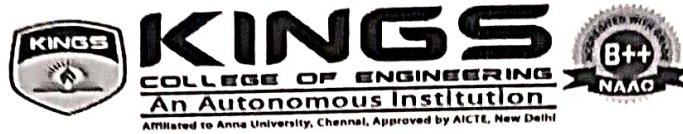
Outcome:

- ✚ The Seminar clearly spotlights the infusion of AI in the civil engineering sector. From structural engineering to all other departments, ChatGPT will play a vital role in the future.
- ✚ In structural engineering, ChatGPT assumes a pivotal role. Its aptitude for comprehending intricate structural designs, analyzing load-bearing capacities, and proposing optimized solutions positions it as a collaborative ally for engineers. The ability to generate design alternatives and conduct virtual simulations facilitates swift iteration and optimization, resulting in cost-effective and resilient structures.
- ✚ The journey towards a smarter, safer, and more efficient civil engineering sector is well underway, driven by the synergies between human expertise and the capabilities of generative AI.
- ✚ The advent of generative artificial intelligence, as illustrated by technologies such as ChatGPT, has inaugurated a new era of ingenuity and efficacy in civil engineering.


24/02/2024
HOD/CIVIL


24/2/2024
PRINCIPAL

23/02/2024



DEPARTMENT OF CIVIL ENGINEERING

INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

S.NO	NAME	FEEDBACK	SIGN
1	Mr. R.Sundharam	Recent topic and Nice Presentation	R. Sundharam 23/2/24
2	Mr.R.Ramchandar	Trendy Presentation	R. Ramchandar 23/2/24
3	Mrs.A.Suganya	Effective & useful presentation	A. Suganya 23/2/24
4	Mr.A.Sagaya Albert	Nice content, Advanced topic Good presentation	Sagaya Albert 23/02/24
5	Mr.D.Nandakumar	Excellent Presentation.	D.N.K. 23/2/24
6	Mr.K.Sriram gopal	Innovative topic selection, Nice presentation, Worthy	K. Sriram gopal 23/02/24



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024

CIRCULAR

DATE: 24.02.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mrs.A.SUGANYA

Date : 28.02.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM

D. Nandakumar
DRC MEMBER 24/02/2024

S. Suganya
24/02/2024
HOD/CIVIL



DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR – REPORT

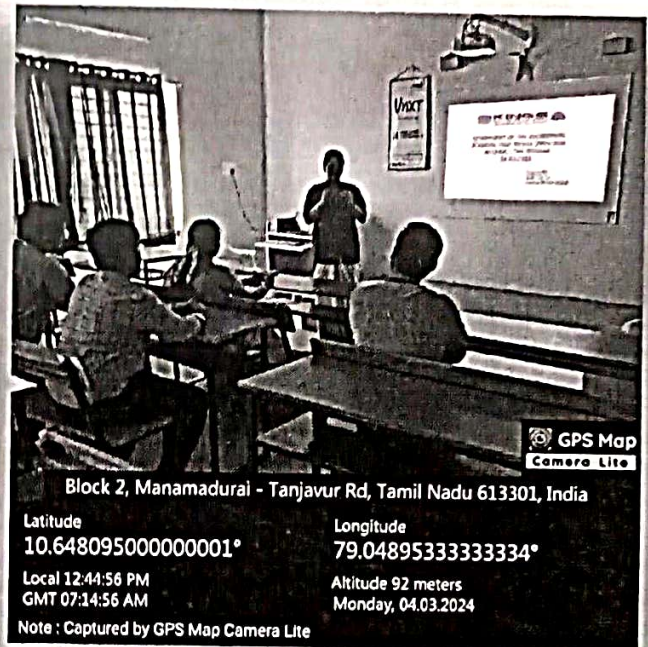
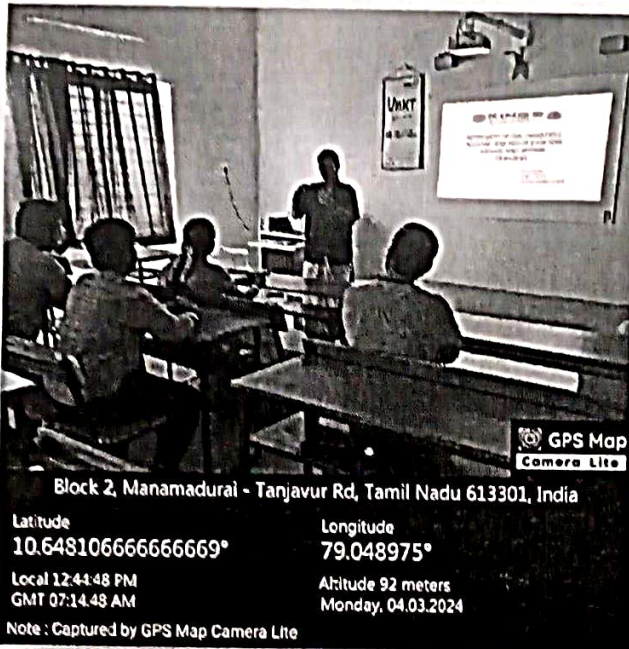
04/03/2023

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 04th March, 2024 at 12:30 PM. Mrs.A.Suganya/AP delivered his seminar talk on “Guided approach for utilizing concrete robotic 3D printing for the architecture, engineering and construction industry. The paper was referred from SPRINGER Journal, Asian Journal of Civil Engineering (2023).



Internal Seminar Session by Mrs.A.Suganya /AP CIVIL

Theme:

In this study the emerging field of robotic 3D printing offers practical alternatives to conventional building methods that are currently used in the Architecture, Engineering, and Construction (AEC) industry. Robotic 3D printing has many advantages over the conventional construction as it reduces human error, is relatively inexpensive, and opens the door to the creative complex designs while reducing the amount of expertise required to complete the construction process. At present, there is a shortage of resources offering guidance on how to utilize the available technology. In this paper, which paves the way for accessing the most recent information regarding the robotic 3D printing technology of interest. We also use the resulting classification methods to present a decision-making workflow to streamline the process of selecting the most appropriate approach. We also examined and performed a detailed analysis on three case studies of prominent buildings that have been constructed using 3D printing technology. The categorical parameters were selected carefully to form a clear, informative distinction between the buildings. Printing method and motion type were the most important parameters when it comes to robotic 3D printing. A new database was created and demonstrated to elucidate the types of the additive manufacturing that can be used. By analyzing the data, we hope to facilitate the development of new structures as they relate to 3D printing in the AEC industry.

Scope for future work:

- Here, the author has proposed 3D printing in architecture Construction is very well suited to 3D printing because most of the information that is required to create an item will exist as a result of the design process.
- Also, the industry is a lot experienced and keen in using computer aided manufacturing

Outcome:

The taxonomical categorization is dependent on several parameters that particularly distinguish categories of 3D printed buildings based on the potential impact that they may have on the AEC industry. It is important to note that in line with the inclusion criteria that requires the building process be consistent with robotic 3D printing methods being used in the AEC industry, the taxonomy considered only buildings that utilized materials that can withstand high stresses. In addition, four parameters were selected to achieve a clear classification for the 3D printed construction. The criteria for selecting each parameter to classify the constructions that used the 3D printing technology were determined to demonstrate the methodology of each structure.

R. Saranan
09/03/2024
HOD/CIVIL

J. Praveen
09/03/2024
PRINCIPAL



DEPARTMENT OF CIVIL ENGINEERING 04/03/2024
INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

S.NO	NAME	FEEDBACK	SIGN
1	Dr.R.Saravanan	Excellent Presentation.	R. Saravanan 04/03/24
2	Mr.D.Nandhakumar	Informative session	D. Nandhakumar 04/03/2024
3	Mr.A.Sagaya Albert	Excellent presentation. for advancement in structural Engineering.	Sagaya Albert 04/03/24
4	Mrs.Kanimozhi	Excellent and innovative Presentation	K. Kanimozhi 4/3/24
5.	Mr.A.Sriram Gopal	Informative session	A. Sriram Gopal 04/3/24



**DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024**

CIRCULAR

DATE: 04.03.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mr. K.SRI RAM GOPAL, AP/CIVIL

Date : 06.03.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM

D. Nandakumar
04/03/24
DRC MEMBER

R. Srinivasan
04/03/24
HOD/CIVIL

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR - REPORT

08/03/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

This Seminar session was held at the Department of Civil Engineering on 06th March, 2024 at 12:30pm. Mr. SRI RAM GOPAL. K , AP/CIVIL was delivered his seminar talk on **Effects of Corn Cob Ash as Partial Replacement of Cement for Stabilization of an Expansive Clay by Worku Yifru et al** . The paper was referred from Hindawi Journal, Advances in Civil Engineering Volume 2022, Article ID 6788120, 13 pages, Heritage science (2021) published on NOV 2022.



Internal Seminar Session by Mr. SRI RAM GOPAL. K AP/CIVIL

Theme:

In this study, an attempt has been made to assess the effects of corn cob ash (CCA) as a partial replacement of cement for the stabilization of expansive clay to be used as road

subgrade material. Corn cob is a waste agricultural product obtained during the production of corn. After it has been converted to ash, tests are carried out on the pozzolanic property and elemental composition of corn cob ash (CCA).

Scope for future work:

- ❖ Preliminary tests were performed on the natural soil sample for purposes of classification and identification of some required properties of the sample.
- ❖ Following the required preliminary laboratory analysis, the clay was stabilized with cement and CCA in varying proportions of 2, 4, 6, and 8%, separately.
- ❖ The maximum stabilization effect occurs at 8 and 4% of cement and CCA, respectively.
- ❖ With this percentage, the CBR of the sample increased from 2.62% at 0% to 10.47% and 3.31% at 8 and 4% of cement and CCA, respectively.
- ❖ As a result, 8% of cement was taken as the total amount for different cement and corn cob ash (C: CCA) ratios of 1: 1, 1: 2, 1: 3, and 1: 4 in the blending stabilization.

Outcome:

- ❖ When the mix ratio was at its ideal, the plasticity index (PI) reduced from 57.11% to 27.65% in the soil sample (1: 2 C: CCA).
- ❖ When treating expansive soil with CCA-cement addition agents, the MDD shows a modest rise while the OMC is reduced. When the mix ratio is at its ideal level, MDD rises from 1.385 g/cm³ to 1.40 g/cm³ and OMC reduces from 36.5% to 30.5% (1:2, C:CCA). Increasing the cement in a CCA-cement mix ratio often causes the maximum dry density and optimal moisture content to increase and decrease, respectively.
- ❖ The initial rise for the CBR test was from the control value of 2.62% to 6.72%, at an optimal mix ratio of at (1:2 C: CCA). This was followed by a reduction in the CCA-cement mix ratio as CCA dosage was increased.
- ❖ Finally, Staff members shared their views regarding seminar and gave their valuable feedback.


HOD/CIVIL 21/03/2024

Good.

J. Prasad
21/3/2024
PRINCIPAL



KINGS
COLLEGE OF ENGINEERING
An Autonomous Institution
Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi



DEPARTMENT OF CIVIL ENGINEERING

INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

S.NO	NAME	FEEDBACK	SIGN
1	Dr.R.Saravanan	EXcellent Presentation.	R. Sundharam 06/03/24.
2	Mr. R.Sundharam	Good Presentation. clear Information received.	R. Sundharam 06/03/24
3	Mr.K.Arun	Very good topic with clear Explanation	K. Arun 06/03/24
4	Mr. D.Nandha Kumar	Excellent Presentation.	D. Nandha Kumar 06/03/24
5	Mrs.A.Suganya	Innovative and conceptual Presentation	A. Suganya 06/03/24.
6	Mr.A.Sagaya Albert	Very nice presentation with informative content	A. Sagaya Albert 06/03/24
7	Mrs.K.Kanimozhi.	Innovative content with Excellent performance	K. Kanimozhi 06/03/24.

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024(even)

CIRCULAR

DATE: 07.03.2024


This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

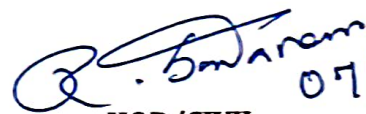
Name of the faculty : Mr.A.SAGAYA ALBERT

Date : 08.03.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


DRC MEMBER 07/03/2024


HOD/CIVIL 07/03/2024.

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER

INTERNAL STAFF SEMINAR - REPORT

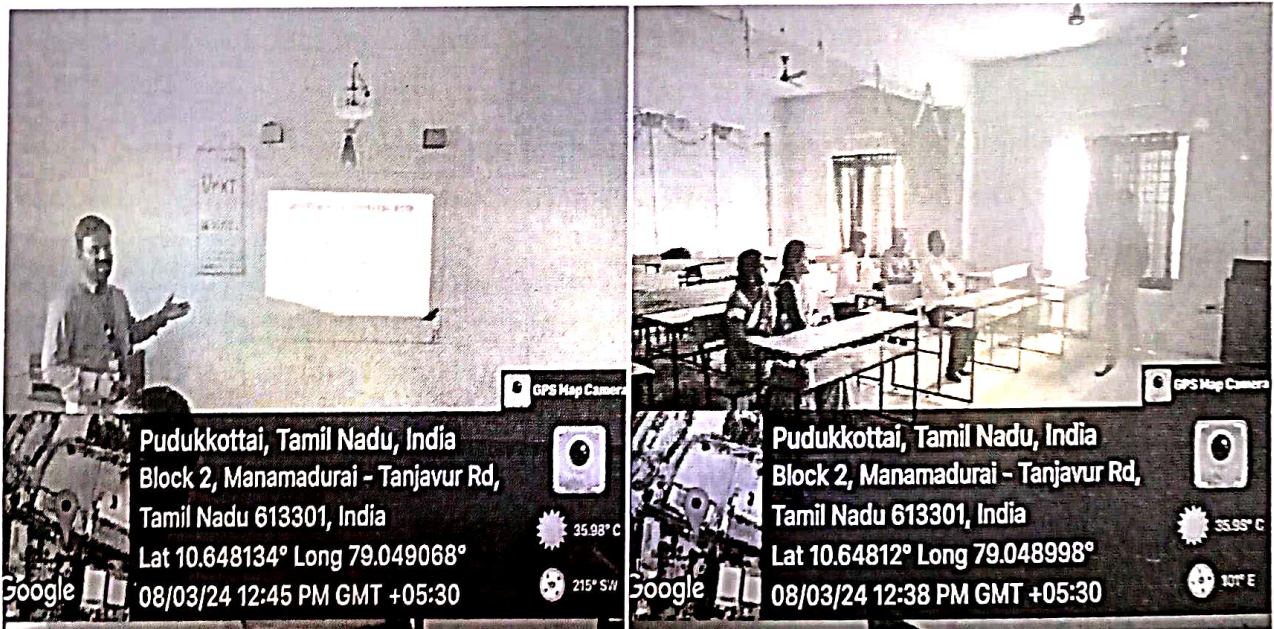
08/03/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

This Seminar session was held at the Department of Civil Engineering on 08th March, 2024 at 12:30pm. Mr. SAGAYA ALBERT A, AP/CIVIL was delivered his seminar talk on Cellular concrete: Utilization of plastic and glass waste as a replacement of fine aggregate. The paper was referred from Construction and Building Materials, Volume 200 Pages 637-647.



Internal Seminar Session by Mr. SAGAYA ALBERT AP/CIVIL

Theme:

This article presents a complete review with the main aspects that influence the application of cellular concrete: raw materials, production methods and expected properties based on density. This paper aims at identifying the possibility of using recycled materials such as crushed glass and plastic wastes in foam concrete as substitute filler material for fine river sand. A protein based foaming agent was adopted for this study. In this research study foam concrete blocks were prepared according to the designed proportions to attain the maximum density of 1900kg/m^3 . In this project, the mixing of recycled glass wastes 5%, 10%, 15% and recycled plastic wastes 1%, 3% & 5% were added as a filler in foam concrete. The 7, 14 and 28 days compressive strength, flexural strength, split tensile strength of each batch of concrete were studied and compared with conventional foam concrete. The study showed that the incorporation of recycled glass and plastic waste in conventional foam concrete is effective and it will be useful for load bearing wall applications.

Scope for future work:

- ❖ In this study, the concept of foam concrete has been studied. The fabrication technique of foam concrete has been studied.
- ❖ The physical and mechanical properties, advantages, application of foam concrete has been studied.
- ❖ The density value decreased with increasing the percentage of PET content. The decreasing ratio of density is close to 14% especially at 10% of PET.

Outcome:

- ❖ From this study, the compressive strength and durability of foam concrete increases with the age. But the compressive strength of this concrete mixes (i.e. CFPG-1, CFPG-2 & CFPG-3) was 41 to 44% lower than conventional concrete at 28 days.
- ❖ The tensile strength and flexural strength of this concrete mixes increases with age.
- ❖ Finally, staff members shared their views regarding the seminar and gave their valuable feedback.


S. Narasimha
08/03/2024
HOD/CIVIL


J. M. Srinivas
8/3/2024
PRINCIPAL



KINGS

COLLEGE OF ENGINEERING
An Autonomous Institution

Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi



DEPARTMENT OF CIVIL ENGINEERING

INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

S.NO	NAME	FEEDBACK	SIGN
1	Dr.R.Saravanan	Excellent Presentation.	R. Saravanan 08/03/24.
2	Mr. R.Sundharam	Informative and Innovative lesson	R. Sundharam 08/03/24.
3	Mr.K.Arun	Much needed topic with excellent presentation	K. Arun 08/03/24.
4	Mr. D.Nandha Kumar	Excellent Presentation.	D. Nandha Kumar 08/03/24.
5	Mrs.A.Suganya	useful presentation	A. Suganya 08/03/24.
6	Mr. A .Sri Ram Gopal	Nice communication, Topic is innovative	A. Sri Ram Gopal 08/03/24.
7	Mrs.K.Kanimozhi.	Excellent presentation with innovative topic.	K. Kanimozhi 08/03/24.



KINGS
COLLEGE OF ENGINEERING
An Autonomous Institution
Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi



**DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023 - 2024**

CIRCULAR

DATE: 12.03.2024

This is to inform our department faculty that there will be an internal staff seminar. The details of the staff seminar are given below.

Name of the faculty : Mr. K.ARUN, AP/CIVIL

Date : 14.03.2024

Venue : Smart classroom (Hall no 236)

Time : 12:30 PM


D. Nandakumar
12/03/24
DRC MEMBER


R. Suresh
12/03/24
HOD/CIVIL

DEPARTMENT OF CIVIL ENGINEERING
ACADEMIC YEAR 2023-2024/EVEN SEMESTER
INTERNAL STAFF SEMINAR – REPORT

14/03/2024

Background & Objective

Department of Civil Engineering had organized an Internal Seminar for the Department staff members for accessing online journals. The purpose of this seminar is to equip the faculty in new techniques through accessing online journals like MAT, Springer etc.

Seminar Session

A Seminar was held in the Department of Civil Engineering on 14th March, 2024 at 01:10 PM. Mr.K.Arun /AP delivered his seminar talk on “Advancements in sensors and actuators technologies for smart cities: A comprehensive review”. The paper was referred from SPRINGER Journal, Smart Construction and Sustainable Cities (November 2023).



Internal Seminar Session by Mr.K.Arun /AP CIVIL

Theme:

This review explores advancements in sensors and actuator technologies for smart cities, highlighting the importance of precision and longevity in infrastructure. The dynamic role of actuators in real-time adjustments facilitates responsive urban management. Data security within these systems is crucial, and robust information-sharing mechanisms are needed. The case study on Bengaluru's Smart Traffic Management System demonstrates how the fusion of actuator technology and sensor arrays can enhance urban transportation and sustainability efforts. Prospects include blockchain technology and AI-driven urban management. The objective of this review is to provide a comprehensive analysis of recent developments in sensors and actuators for smart cities, with a particular emphasis on their implications for urban planning, data security, legal issues, and the potential for transformative innovation in urban management.

Scope for future work:

- Here, the author has proposed the framework for smart transportation using sensors and actuators. In addition the review can be extended for waste management and energy efficiency also.
- On the proposed review, blockchain technology has been explained. More clarifications can be given on AI and ML technologies for smart cities.

Outcome:

The Seminar clearly highlighted the importance of sensors and actuators in the Internet of Things (IoT) connections that serve as the framework for smart cities. Additionally, it sheds light on the wide range of sensors designed for different IoT applications as well as the variables affecting their service life, highlighting how crucial precision and durability are. This review discusses data security in big data exchange among actuators, legal foundations for smart city development, and key elements for creating a smart city. It highlights the benefits of advanced actuator technology and sensor integration, and emerging trends like AI driven urban management and block chain-enhanced data security.


Q. Sandan
14/03/2024.
HOD/CIVIL


J. Praveen
14/3/2024.
PRINCIPAL



KINGS
COLLEGE OF ENGINEERING
An Autonomous Institution
Affiliated to Anna University, Chennai. Approved by AICTE, New Delhi.



DEPARTMENT OF CIVIL ENGINEERING

14/03/2024

INTERNAL STAFF SEMINAR - ATTENDANCE AND FEED BACK

S.NO	NAME	FEEDBACK	SIGN
1	Dr.R.Saravanan	Excellent presentation.	R. Saravanan 14/03/2024.
2	Mr.R.Sundharam	Innovative Presentation	R. Sundharam 14/03/24
3	Ms.A.Suganya	Nice & effective present - altern	A. Suganya 14/03/24.
4	Mr.A.Sagaya Albert	Excellent presentation Trendy topic	Sagaya Albert 14/03/24
5	Mr.K.Sriram Gopal	Innovative Topic, Nice Presentation	K. Sriram Gopal 14/03/24
6	Ms.K.Kanimozhi	Excellent Presentation with detailed content.	K. Kanimozhi 14/3/24.



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

INTERNAL STAFF SEMINAR





DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

6.3.3 NUMBER OF PROFESSIONAL DEVELOPMENT/ ADMINISTRATIVE TRAINING PROGRAMS ORGANISED BY THE INSTITUTION FOR TEACHING AND NON- TEACHING STAFF DURING THE YEAR

INTERNAL STAFF SEMINAR SUMMARY

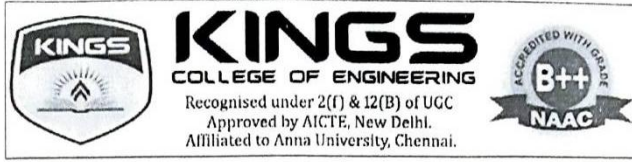
S. No	Date	Title	Staff Name	No.of Participants
ACADEMIC YEAR 2023 - 2024 ODD SEMESTER				
1.	03.08.2023	Emotional Intelligence	Ms. N. Dhamayandhu Ms. B. Bavithra	13
2.	22.08.2023	FTOR-Mod PSO: A Fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO	Ms. K. Abinaya	13
3.	04.11.2023	Load Balancing framework for cross region tasks in cloud computing	Ms. B. Sangeetha	15
4.	07.11.2023	Emerging Technologies	Ms. S. Abikayil Aarthi	14
ACADEMIC YEAR 2023 - 2024 EVEN SEMESTER				
5.	27.02.2024	Android basis with compose	Ms. T. Abithakujalambal	15
6.	14.03.2024	Deep Learning in cloud security	Ms. M. Vidhya	14
7.	02.04.2024	Health Promotion Proposal & obesity prevention	Ms. D. Mangalambiga	14
8.	07.05.2024	Cloud Computing	Ms. T. Sindhu	17

(Signature)
Coordinator

(Signature) 28/6/24
HoD/ CSE
HOD of Computer Science & Engineering
KINGS COLLEGE OF ENGINEERING
Punalakulam, Gandhinagar (Tk),
Pudukottai (Dt) - 613 303.

(Signature) 28/6/2024
Principal
Kings College of Engineering
(Autonomous)
Punalakulam - 613 303

**ACADEMIC
YEAR
2023- 2024
ODD SEM**



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023-24(ODD SEM)

CIRCULAR

31.7.2023

Staff members are requested to attend the internal staff seminar .

Resource Person: Ms.N.Dhamayandhi & Ms.B.Bavithra

Topic: Emotional Intelligence

Venue: 223 (Smart Class room)

Timing: 12.35 pm - 1.15 pm

S. Puv
31/7/23
Staff Seminar Incharge
(Ms.S.Puvaneswari AP /CSE)

K. C. D. Rao
31/7/23
HOD/CSE (i/c)



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023-24 (ODD SEM)

ATTENDANCE SHEET - INTERNAL STAFF SEMINAR

Date: 3.8.23

Resource Person: Ms.N.Dhamayandhi & Ms.B.Bavithra

Topic: Emotional Intelligence

S.NO	STAFF NAME	SIGNATURE
1.	Dr.S.M.Uma	Medical Leave
2.	Dr.K.Abhirami	K. Abhirami 3/8/23
3.	S.Puvaneswari	S. Puvaneswari 3/8/23
4.	S.Rajarajan	S. Rajarajan 3/8/23
5.	R.Suganthalakshmi	R. Suganthalakshmi 3/8/23
6.	M.Arun	M. Arun 3/8/23
7.	S.Priyadharshini	Medical Leave
8.	N.Dhamayandhi	N. Dhamayandhi 3/8/23
9.	S.Abikayil aarthi	S. Abikayil aarthi 3/8/23
10.	B.Bavithra	B. Bavithra 3/8/2023
11.	Dr.S.Kannan	Dr. S. Kannan 3/8/23
12.	Ms.M.Kavitha	Ms. M. Kavitha 3/8/23
13.	Ms.D.Mangalambigai	Ms. D. Mangalambigai 3/8/23
14.	Ms.K.Abinaya	Ms. K. Abinaya 3/8/23
15.	Ms.B.Sangeetha	Ms. B. Sangeetha 3/8/23



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 - 2024 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 3.8.23 at smart classroom.

OBJECTIVE

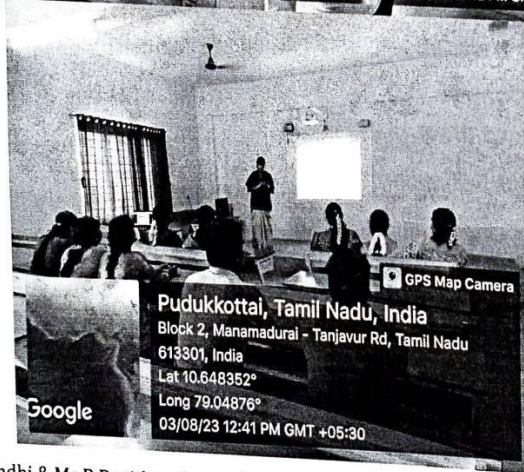
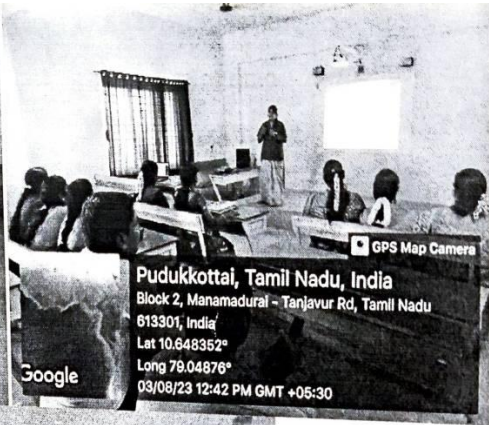
The objective of this seminar is to gain insight knowledge about Emotional Intelligence.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 3.8.23 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.N.Dhamayandhi and Ms.B.Bavithra explained the basics of Emotional Intelligence, factors that affect the human mind. They have described about DISC assessment tool which analyzes the behavior of a person. A DiSC assessment also measures the values of a person's prioritize. The results explain the percentage of each style of a person are and what that means for how the person handle challenges, interact with others, approach life and how others perceive that person. There are 4 types of personalities available,

1. Dominant
2. Influential
3. Complaint
4. Steady

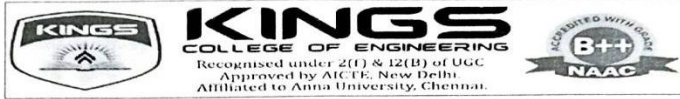
Each personality is mapped with an animal. The animal symbolizes the behavior of that character. From that analysis, the person may enhance their good qualities and reduces their mistakes.



Ms.N.Dhamayandhi & Ms.B.Bavithra shared their concepts of DISC Assessment (part of Emotional Intelligence)

S.Pu
Co-ordinator
(Ms.S.Puvaneswari AP / CSE)

K. Collee
1 HOD/CSE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023-24 (ODD SEM)

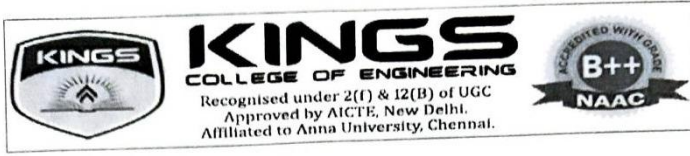
FEEDBACK - INTERNAL STAFF SEMINAR

Date: 3.8.23

Resource Person: Ms.N.Dhamayandhi & Ms.B.Bavithra

Topic: Emotional Intelligence

S.No	Staff Name	Feedback	Signature
1.	S.POVANESWARI	Informative Session	X.Pur 3/8/23
2.	KAVITHA.M	Very good	Not 23/8/23
3.	M. ARUN	Very usefull session.	Co. [Signature]
4.	Ms. J. [Signature]	— Good —	[Signature] 2/8/23
5.	R. Chigntha [Signature]	Good.	[Signature] 2/8/23
6.	D. [Signature]	— very good —	[Signature] 3/8/23
7.	K. Abinaya	- Very Good -	[Signature] 3/8/23
8.	B. Sangeetha	good	[Signature] 3/8/23
9.	S. RAJARAJAN	Nice session	[Signature]
10.	M. ARUN	Good session	[Signature]
11.	Po. Bavithra	Good session	[Signature]
	S. Abi Cayil Anjali	Good session	[Signature]



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24(ODD SEM)

CIRCULAR

16.8.2023

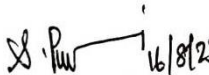
Staff members are requested to attend the internal staff seminar .

Resource Person: Ms.K.Abinaya AP/ CSE

Topic: **FTOR-Mod PSO: A fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO**

Venue: 223 (Smart Class room)

Timing: 12.35 pm - 1.15 pm


Staff Seminar Incharge
(Ms.S.Puvaneswari AP /CSE)


1 HOD/CSE 16/8/23



**DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24 (ODD SEM)**

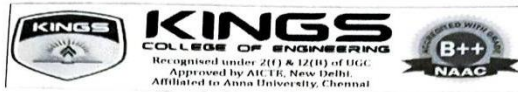
ATTENDANCE SHEET - INTERNAL STAFF SEMINAR

Date: 22.8.23

Resource Person: Ms.K.Abinaya AP/CSE

Topic: FTOR-Mod PSO: A fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO

S.NO	STAFF NAME	SIGNATURE
1.	Dr.S.M.Uma	Medical Leave
2.	Dr.K.Abhirami	K. Abhirami 22/8/23
3.	S.Puvaneswari	S. Puvaneswari 22/8/23
4.	S.Rajarajan	S. Rajarajan
5.	R.Suganthalakshmi	R. Suganthalakshmi
6.	M.Arun	M. Arun 22/8/23
7.	S.Priyadharshini	Medical Leave
8.	N.Dhamayanthi	N. Dhamayanthi 22/8/23
9.	S.Abikayil aarthi	S. Abikayil aarthi 22/8/23
10.	B.Bavithra	B. Bavithra 22/08/23
11.	Dr.S.Kannan	Dr. S. Kannan
12.	Ms.M.Kavitha	Ms. M. Kavitha 22/8/23
13.	Ms.D.Mangalambigai	Ms. D. Mangalambigai 22/8/23
14.	Ms.K.Abinaya	Ms. K. Abinaya 22/8/23
15.	Ms.B.Sangeetha	Ms. B. Sangeetha



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 – 2024 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 22.8.23 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about fault tolerance algorithm for Wireless Sensor Networks.

SESSION DETAILS

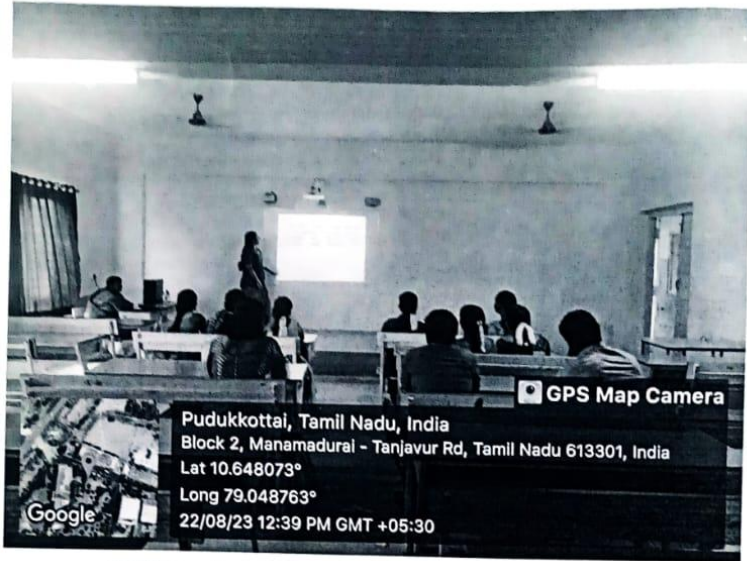
Internal seminar for faculty of Computer Science Engineering department was conducted on 22.8.23 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.K.Abinaya explained the concepts of Wireless Sensor Networks (WSN), need of fault tolerance in WSN and discussed various algorithms to achieve the fault tolerance. She described the concept of fault tolerance and optimal relay node with modified particle swarm optimization (FTOR-mod PSO). From the results proved that the proposed method reduces delay to 0.15 s by reducing the routing overhead to 2.4%, thereby improving the network lifetime to 92.714%.

OUTCOME OF THE EVENT

- Got an idea about relay node selection algorithm, modified PSO algorithm
- Understand the importance of those algorithms in WSN domain.
- Motivate the students to do project in this domain
- Faculty members may have a research idea in this domain

Journal Details:

- FTOR-Mod PSO: A fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO



Ms.K.Abinaya discussed about the concepts of relay node selection algorithm

X.Rw
Co-ordinator
(Ms.S.Puvaneswari AP / CSE)

K. coll
HOD/CSE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023-24 (ODD SEM)

FEEDBACK - INTERNAL STAFF SEMINAR

Date: 22.8.23

Resource Person: Ms.K.Abinaya AP/CSE

Topic: FTOR-Mod PSO: A fault tolerance and an optimal relay node selection algorithm for WSN using modified PSO

S.No	Staff Name	Feedback	Signature
1.	M. APUN	Very useful session	
2.	D. Mangalambikai	Informative for faculties	
3.	B. Sangeetha	Very useful	
4.	S. Purneswari	Got an idea about PSO in fault tolerance in WSN	
5.	R. Chandralekshmi	Informative session	
6.	S. Abinaya Arathi	Initiative on WSN, very useful	
7.	B. Banitha	Got more knowledge about WSN and PSO	
8.	N. Phaniyandhi	Informative session	
9.	Kavitha M	Very useful session	
10.	Dr. S. Lakshmi	Useful session, Good	
11.	S. Rajarajan	Useful session	



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24(ODD SEM)

CIRCULAR

2.11.2023

Staff members are requested to attend the internal staff seminar .

Resource Person: Ms.B.Sangeetha AP/ CSE

Topic: Load Balancing framework for cross region tasks in cloud computing

Date: 4.11.23

Venue: 223 (Smart Class room)

Timing: 10.30 am - 11.15 am

S.Puv 2/11/23
Staff Seminar Incharge
(Ms.S.Puvaneswari AP /CSE)

K. Sangeetha 2/11/23
HOD(i/c)/ CSE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023-24 (ODD SEM)

ATTENDANCE SHEET - INTERNAL STAFF SEMINAR

Date: 4.11.23

Resource Person: Ms.B.Sangeetha AP/CSE

Topic: Load Balancing framework for cross region tasks in cloud computing

S.NO	STAFF NAME	SIGNATURE
1.	Dr.S.M.Uma	Medical Leave
2.	Dr.K.Abhirami	K. Col 2023/11/23
3.	S.Puvanewari	S.P. 4/11/23
4.	S.Rajarajan	S.R. 4/11/23
5.	B.Sugamalakshmi	B.S. 4/11/23
6.	M.Arun	M. Arun 4/11/23
7.	S.Priyadharsini	Medical Leave
8.	N.Dhamayanthi	N.D. 4/11/23
9.	S.Abhikayli aarthi	S.A. 4/11/23
10.	B.Bavithra	B. Bavithra 4/11/23
11.	Dr.S.Kannan	Dr.S.Kannan 4/11/23
12.	Ms.M.Kavitha	Ms.M.Kavitha 4/11/23
13.	Ms.D.Mangalambiga	Ms.D.Mangalambiga 4/11/23
14.	Ms.K.Abinaya	Ms.K.Abinaya 4/11/23
15.	Ms.B.Sangeetha	Ms.B.Sangeetha 4/11/23
16.	Ms.M.Vidhya	Ms.M.Vidhya 4/11/23
17.	Ms.T.Sindhu	Ms.T.Sindhu 4/11/23



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 - 2024 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 4.11.23 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about load balancing algorithm in cloud computing at the database level.

SESSION DETAILS

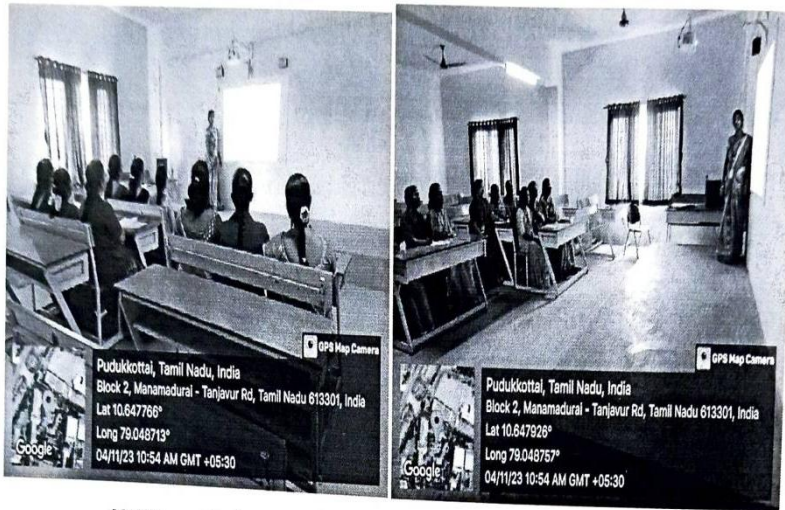
Internal seminar for faculty of Computer Science Engineering department was conducted on 4.11.23 from 10.30 A.M to 11.15 A.M in Smart Class room. Ms.B.Sangeetha explained the concepts of load balancing which helps to distribute all loads (traffic) that come from the client-side. It also ensures that each computing resource is distributed efficiently and fairly for users. She described the four types of load balancer in AWS and its benefits. The proposed load balancing model consists of an automatic scaling listener, application module, migration module monitoring and CPU performance module. The automatic scaling listener is divided into three sub-modules monitor, analyzer, and planner under the knowledge base. The automatic scaling listener module is connected with the Application module and monitoring module. She concluded that automatic scaling listener monitored the network traffic and spread the dynamic load equally across multiple cross-region for better computing load.

OUTCOME OF THE EVENT

- Got an idea about load balancing in cloud computing
- Motivate the students to do project in this domain
- Faculty members may have a research idea in this domain

Journal Details:

Jaleel Nazir, et.al, "Load Balancing framework for cross region tasks in cloud computing", *Computers, Materials & Continua* DOI:10.32604/cmc.2022.019344



Ms.B.Sangeetha discussed about load balancing algorithm in Cloud Computing

S.Puv
7/11/23
Co-ordinator
(Ms.S.Puvaneswari AP / CSE)

R. Sangeetha
7/11/23
HOD/CSE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2022-23 (2nd SEM)

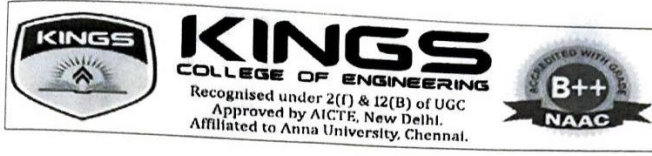
FEEDBACK - INTERNAL STAFF SEMINAR

Date: 4.11.23

Resource Person: Ms.B.Sangeetha AP/CSE

Topic: Load Balancing framework for cross region tasks in cloud computing

S.NO	STAFF NAME	Comments	SIGNATURE
1.	S.PUVANESWARI	Informative Session	S.Pur 4/11/23
2.	R. Sangeetha dahanu	Useful Session	RS
3.	T. SINDHU	Very Useful Session	T.S 4/11/23
4.	M.VIDHYA	Good session	M.V 4/11/23
5.	K. ABINAYA	Informative Session	K.A 4/11/23
6.	D.Mangalambikai	Informative session	D.M 4/11/23
7.	S.RAJARAJAN	Useful Information	S.R 4/11/23
8.	M. ARUN	Useful & Informative	M.A 4/11/23
9.	B. Banitha	Informative	B.B 4/11/23
10.	S. Abi Kajal Anitha	Highly useful	S.A 4/11/23
11.	N.Dhaseayandhi	Informative session	N.D 4/11/23



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24(ODD SEM)

CIRCULAR

2.11.2023

Staff members are requested to attend the internal staff seminar .

Resource Person: Ms.S.Abikayil Aarthi AP/ CSE

Topic: Emerging Technologies

Date: 7.11.23

Venue: 223 (Smart Class room)

Timing: 12.30 pm -1.15 pm

S.Pu 2/11/23
Staff Seminar Incharge
(Ms.S.Puvaneswari AP /CSE)

K. Collo 2/11/23
HOD(i/c)/ CSE

**KINGS**KING'S COLLEGE OF ENGINEERING
AND TECHNOLOGY
K. J. Somaiya Institute of Engineering and Information Technology
Warananasi, Andhra Pradesh - 520 002

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023-24 (0000 SEM)

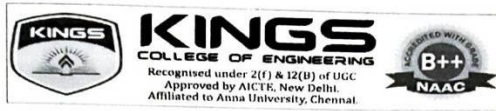
ATTENDANCE SHEET - INTERNAL STAFF SEMINAR

Date: 7.11.23

Resource Person: Ms.S.Abhaya Aarthy AP/CSE

Topic: Emerging Technologies

S.No	STAFF NAME	SIGNATURE
1.	Dr. S.M Uma	Medical Leave
2.	Dr. K.Ashirani	K. Ashirani 7/11/23
3.	S.Prasanna	S. Prasanna 7/11/23
4.	S.Rajaram	S. Rajaram
5.	R.Suganthakshmi	R. Suganthakshmi 7/11/23
6.	M.Arun	M. Arun
7.	S.Priyadharsini	Medical Leave
8.	N.Dhanayathi	N. Dhanayathi
9.	B.Bavithra	B. Bavithra
10.	Dr. S.Kannan	Dr. S. Kannan
11.	Ms.M.Kavitha	Ms. M. Kavitha
12.	Ms. D. Mangalambiga	Ms. D. Mangalambiga 7/11/23
13.	Ms. K. Abhaya	Ms. K. Abhaya 7/11/23
14.	Ms. B. Sangeetha	Ms. B. Sangeetha
15.	Ms. M. Vidhya	Ms. M. Vidhya
16.	Ms. T. Sindha	Ms. T. Sindha



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 - 2024 ODD SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 7.11.23 at smart classroom.

OBJECTIVE

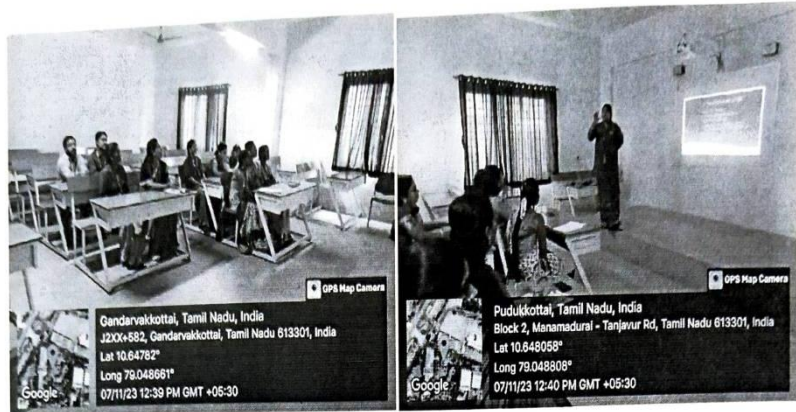
The objective of this seminar is to facilitate the upgradation of knowledge, skills and create awareness about the recent trends in CSE.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 7.11.23 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.S.Abikayil Aarthi AP/CSE list down the recent trends of emerging technologies in Computer Science and Engineering domain. She explained the various approaches of Artificial Intelligence, its application in real time scenario. She also described about the difference between machine learning and deep learning. She explained the concepts of Augmented Reality with real time application like snapchat. She mentioned the influence of Computer Science & Engineering domain in Robotics field. She concluded that how the modern desktop / mobile applications were enhanced using these technologies.

OUTCOME OF THE EVENT

- Got an idea about Augmented and Virtual Reality
- Motivate the students to do mini project / project in these areas.
- Faculty members may use these technologies for their teaching learning process.
- Faculty members may select research topics in these domains.



Ms.S.Abikayil Aarthi AP/CSE discussed about various emerging trends in CSE Domain

S. Puv
10/11/23
Co-ordinator
(Ms.S.Puvaneswari AP / CSE)

K. S. S. S. S.
10/11/23
HOD/CSE



KINGS
COLLEGE OF ENGINEERING
Approved under AICTE & UGC
Affiliated to Anna University, Chennai.



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2022-23 (ODD SEM)

FEEDBACK - INTERNAL STAFF SEMINAR

Date: 7.11.23

Resource Person: Ms.S.Abikayil Aarthi AP/CSE

Topic: Emerging Technologies

S.NO	STAFF NAME	Comments	SIGNATURE
1.	R. Suganlalini	Exposed about the new technology	R.S
2.	D. Mangalambika	Clear lecture about recent technologies	D.M
3.	M.VIDHYA	Very useful session	M.V
4.	T. SINDHU	Informative session	T.S
5.	K. DEVIYAS	Useful session	K.D
6.	S.PUVANESWARI	Known about various Technologies	S.P
7.	B. Sangeetha	useful session	B.S
8.	S. RAJARAJAN	Good session	S.R
9.	H. ARUN	Good & Informative	H.A
10.	N. Dharmayandhi	Good session	N.D
11.	B. Banitha	Good & Informative	B.B

**ACADEMIC
YEAR
2023 – 2024
EVEN SEM**



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

CIRCULAR

23.02.2024

Staff Members are requested to attend the internal staff seminar.

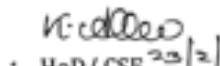
Resource Person: Ms. T. Abithakujalambal

Topic :Android basis with compose

Venue : 223 (Smart Classroom)

Timing : 12.35 P.M. – 1.15 P.M.


Staff Seminar Incharge
(Ms. S. Puvaneswari AP/ CSE)


HoD/ CSE 23/2/24



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023- 2024

ATTENDANCE SHEET- INTERNAL STAFF SEMINAR

Date: 27.02.2024

Resource Person: Ms. T. Abithakujalambal

Topic :Android basis with compose

S. NO	STAFF NAME	SIGNATURE
1.	Dr. S. M. Uma	MEDICAL LEAVE
2.	Dr. K. Abhirami	K. Abhirami
3.	S. Puvaneswari	S. Puvaneswari
4.	S. Rajarajan	S. Rajarajan
5.	R. Suganthalakshmi	R. Suganthalakshmi
6.	M. Arun	M. Arun
7.	S. Priyadharshini	MEDICAL LEAVE
8.	N. Dhamayandhi	N. Dhamayandhi
9.	S. Abikayil Aarthi	S. Abikayil Aarthi
10.	B. Bavithra	B. Bavithra
11.	Dr. S. Kannan	S. Kannan
12.	Ms. M. Kavitha	Ms. M. Kavitha
13.	Ms. D. Mangalambigai	Ms. D. Mangalambigai
14.	Ms. K. Abinaya	Ms. K. Abinaya
15.	Ms. B. Sangeetha	Ms. B. Sangeetha

16. Ms. M. Vidhya

M. Vidhya
27/2/24

17. Ms. T. SINDHU

T. Sindhu
27/2/24



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 27.02.2024 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain the insight knowledge about Android basis with compose.

SESSION DETAILS

The seminar for the faculties of Computer Science & Engineering department was conducted on 27.02.2024 from 12.30 P.M. to 01.15 P.M.in Smart Classroom. Ms. T. Abithakujalambal explained about "Android Basics with Jetpack Compose" the main aim to introduce internal staff to modern Android development practices using Jetpack Compose. Jetpack Compose is Google's latest toolkit for building native UI for Android applications. This session focused on its key features, benefits, and practical implementation techniques to improve development efficiency.

Key Takeaways

- Jetpack Compose simplifies UI development by using a declarative approach.
- The modularity and reusability of Compose components help improve productivity.
- Compose is compatible with existing View-based UIs, enabling gradual migration.
- Android Studio provides robust support for Compose, including previews and code hints.

The seminar successfully introduced the internal staff to Android development fundamentals and Jetpack Compose. By adopting Compose, the team can leverage its modern features to build efficient and user-friendly applications.



Ms. T. Abithakujalambal shared their concepts clips

S. Puv 7/5/24
Coordinator
(S. Puvaneshwari AP/ CSE)

J. S. 7/5/24
HoD/ CSE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

FEEDBACK SHEET- INTERNAL STAFF SEMINAR

Date: 27.02.2024

Resource Person: Ms. T. Abithakujalambal

Topic: Android basis with compose

S. NO	STAFF NAME	FEEDBACK COMMENTS	SIGNATURE
01.	Dr. S. Rajarajan	Nice	[Signature]
02.	Dr. K. Chithra	Good presentation	[Signature]
03.	S. Abithakujalambal	Very Nice	[Signature]
04.	B. Banthra	Very Nice	[Signature]
05.	B. Rajaguru	Good	[Signature]
06.	M. Sankar	Very Informative	[Signature]
07.	M. Aron	Good session	[Signature]
08.	T. Sindhu	Useful session	[Signature]
09.	L. Abinaya	Good	[Signature]
10.	S. Laxman	Very Good	[Signature]



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24(EVEN SEM)

CIRCULAR

12.03.2024

Staff members are requested to attend the internal staff seminar .

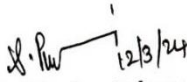
Resource Person: Ms.M.Vidhya AP/ CSE

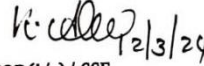
Topic: Deep learning in cloud security

Date: 14.3.2024

Venue: 223 (Smart Class room)

Timing: 1.15 pm


Staff Seminar Incharge
(Ms.S.Puvaneswari AP /CSE)


HOD(i/c)/ CSE



KINGS
COLLEGE OF ENGINEERING
An Autonomous Institution
Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24(EVEN SEM)

ATTENDANCE SHEET - INTERNAL STAFF SEMINAR

Date: 14.3.2024

Resource Person: Ms.M.Vidhya AP/CSE

Topic: Deep learning in cloud security

S.NO	STAFF NAME	SIGNATURE
1.	Dr.S.M.Uma	Medical Leave
2.	Dr.K.Abhirami	K. Abhirami 14/3/24
3.	S.Puvaneswari	S. Puvaneswari 14/3/24
4.	S.Rajarajan	S. Rajarajan
5.	R.Suganthalakshmi	R. Suganthalakshmi
6.	M.Arun	M. Arun
7.	S.Priyadharshini	Medical Leave
8.	N.Dhamayanthi	N. Dhamayanthi
9.	S.Abikayil aarthi	S. Abikayil aarthi
10.	B.Bavithra	B. Bavithra
11.	Dr.S.Kannan	S. Kannan
12.	Ms.M.Kavitha	M. Kavitha
13.	Ms.D.Mangalambigai	D. Mangalambigai
14.	Ms.K.Abinaya	K. Abinaya
15.	Ms.B.Sangeetha	B. Sangeetha
16.	Ms.T.Sindhu	T. Sindhu 14/3/24



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 – 2024 EVEN SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 14.03.24 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain insight knowledge about detection of anomalies and threats, improvement in threat intelligence in cloud environment.

SESSION DETAILS

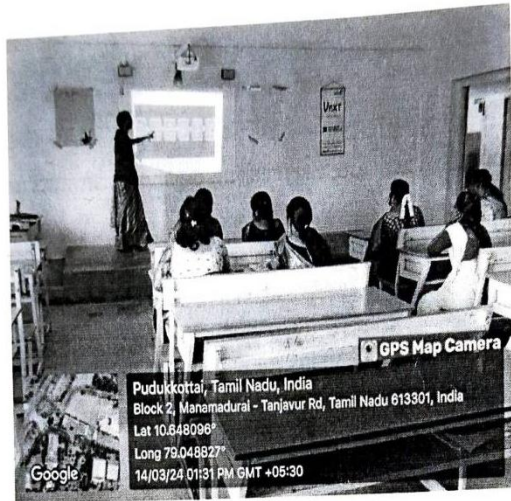
Internal seminar for faculty of Computer Science Engineering department was conducted on 14.03.24 from 01.15 P.M to 01.45 P.M in Smart Class room. Ms.M.Vidhya explained about various deep learning architecture such that Convolutional Neural Network (CNN), Artificial Neural Network (ANN). Deep learning models can identify unusual patterns and behaviors in network traffic and user activities that may indicate potential security threats. Deep learning models can be integrated into security orchestration, automation, and response (SOAR) platforms to automate the response to detected threats. This can include isolating affected systems, blocking malicious IP addresses, and initiating forensic investigations. By understanding user behavior, deep learning models can enhance access control mechanisms, ensuring that only legitimate users gain access to sensitive resources. Deep learning models can be used to create intuitive visualization tools that help security analysts understand complex threat landscapes and make informed decisions.

OUTCOME OF THE EVENT

- Got an idea about deep learning in cloud security
- Motivate the students to do project in this domain
- Faculty members may have a research idea in this domain

Journal Details:

Lumbardha Hasimi, et.al, "Cloud Computing Security and Deep Learning: An ANN approach", *The 14th International Conference on Emerging Ubiquitous Systems and Pervasive Networks (EUSPN 2023) November 7-9, 2023, Almaty, Kazakhstan*



Ms.M.Vidhya discussed about various architecture of deep learning models.

S.Puvaneswari
18/3/24

Co-ordinator
(Ms.S.Puvaneswari AP / CSE)

K. Vidya
18/3/24
HOD/CSE

DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24(EVEN SEM)

FEEDBACK SHEET - INTERNAL STAFF SEMINAR

Date: 14.3.2024

Resource Person: Ms.M.Vidhya AP/CSE

Topic: Deep learning in cloud security

S.NO	STAFF NAME	Comments	SIGNATURE
1.	D.mangalambika	got useful information	[Signature]
2.	S.PURNESWARI	Understand about application of DL in cloud	[Signature] 14/3/24
3.	T-SINDHU	Very good	[Signature] 14/3/24
4.	K. ABINAYA	Very useful session	[Signature] 14/3/24
5.	R. Srinithya	Informative	[Signature]
6.	B. Sangeetha	useful	[Signature]
7.	SIRAJARAJAN	Good	[Signature]
8.	H. ADARSH	Good session	[Signature]
9.	N.DHARMAYANDHI	good session	[Signature]
10.	B. Banitha	Informative	[Signature]
11.	S. Abitha	Highly Informative	[Signature]



KINGS

COLLEGE OF ENGINEERING
An Autonomous Institution

Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023-24(EVEN SEM)

CIRCULAR

28.03.2024

Staff members are requested to attend the internal staff seminar .

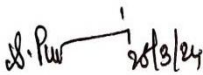
Resource Person: Ms.D.Mangalambigai AP / CSE

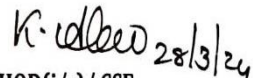
Topic: Health Promotion Proposal & Obesity Prevention

Date:02.4.2024

Venue: 223 (Smart Class room)

Timing: 12.30 pm


Staff Seminar Incharge
(Ms.S.Puvaneswari AP /CSE)


HOD(i/c)/ CSE



KINGS

COLLEGE OF ENGINEERING
An Autonomous Institution



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24 (I SEM)

ATTENDANCE SHEET - INTERNAL STAFF SEMINAR

Date: 02.4.2024

Resource Person: Ms.D.Mangalambikai AP/CSE

Topic: Health Promotion Proposal & Obesity Prevention

S.NO	STAFF NAME	SIGNATURE
1.	Dr.S.M.Uma	Medical Leave
2.	Dr.K.Abhinavi	K. Abhinavi
3.	S.Puvaneswari	S. Puvaneswari
4.	S.Rajarajan	S. Rajarajan
5.	R.Suganthalakshmi	R. Suganthalakshmi
6.	M.Aran	M. Aran
7.	S.Priyadharshini	Medical Leave
8.	N.Dhanyandhi	N. Dhanyandhi
9.	S.Abikayal aarthi	S. Abikayal aarthi
10.	B.Bavithra	B. Bavithra
11.	Dr.S.Kannan	Dr. S. Kannan
12.	Ms.M.Kavitha	Ms. M. Kavitha
13.	Ms.K.Abinaya	Ms. K. Abinaya
14.	Ms.B.Sangeetha	Ms. B. Sangeetha
15.	Ms.M.Vidhya	Ms. M. Vidhya
16.	Ms.T.Sindhu	Ms. T. Sindhu



DEPARTMENT OF COMPUTER SCIENCE & ENGINEERING

ACADEMIC YEAR 2023 – 2024 EVEN SEMESTER

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 2.4.24 at smart classroom.

OBJECTIVE

The objective of this seminar is to educate and empower faculties with knowledge and strategies to effectively address obesity through health promotion efforts.

SESSION DETAILS

Internal seminar for faculty of Computer Science Engineering department was conducted on 2.4.2024 from 12.30 P.M to 1.15 P.M in Smart Class room. Ms.D.Mangalambigai explained the definition of obesity and its classification. She also discussed about the causes and risk factors such that behavioral factors, genetic factors and socio-economic factors. She described various case studies highlighting effective strategies and outcomes about obesity prevention programs. She also explained about various health promotion and prevention strategies such as,

- Physical activity promotion
- Nutrition Education
- Behavioral Change Approaches
- Policy and Environmental Changes

OUTCOME OF THE EVENT

- Got an awareness about the complexities of obesity
- acquire new knowledge about effective strategies for health promotion and obesity prevention
- Faculty members may have a research idea to predict obesity in prior.

Journal Details:

Leire Bastida, "Promoting Obesity Prevention and Healthy Habits in Childhood: The OCARIoT Experience", IEEE Journal of Translational Engineering in Health and Medicine PP(99):1-1, March 2023.



Ms.D.Mangalambigai discussed about modern health issues and its causes

S. Puv
Co-ordinator
(Ms.S.Puvaneswari AP / CSE)

K. V. V.
HOD/CSE



KINGS
COLLEGE OF ENGINEERING
An Autonomous Institution
Affiliated to Anna University, Chennai, Approved by AICTE, New Delhi



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING
ACADEMIC YEAR 2023-24(EVEN SEM)

ATTENDANCE SHEET - INTERNAL STAFF SEMINAR

Date: 02.4.2024

Resource Person: Ms.D.Mangalambigai AP/CSE

Topic: Health Prom **FEEDBACK SHEET - INTERNAL STAFF SEMINAR**

S.NO	STAFF NAME	Comments	SIGNATURE
1.	K.A Bhivane	Essential health awareness session	K. Aditya 2/4/24
2.	R. Sugantha Lakshmi	Informative & Useful	R. Sugantha Lakshmi
3.	M. VISHVA	Good session	M. Vishva 2/4/24
4.	T. SINDHU	Useful session	T. Sindhu 2/4/24
5.	K. ABINAYA	Informative session	K. Abinaya
6.	S. PUVANESWARI	Good Awareness Talk	S. Puvaneswari 2/4/24
7.	B. Sangeetha	informative	B. Sangeetha
8.	S. RAJARAJAN	Useful	S. Rajarajan
9.	M. ARON	Good session	M. Aron
10.	N. DHARANYANOKH	very informative	N. Dharmayanyokh
11.	B. Pavithra	useful	B. Pavithra
12.	S. Abhiramji Aulthi	Highly Informative	S. Abhiramji Aulthi



KINGS
COLLEGE OF ENGINEERING
Registered under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi
Affiliated to Anna University Chennai



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

CIRCULAR

03.05.2024

Staff Members are requested to attend the internal staff seminar.

Resource Person: Ms. T. Sindhu


Topic :Cloud Computing

Venue : 223 (Smart Classroom)

Timing : 12.35 P.M. – 1.15 P.M.


3/5/24

Staff Seminar Incharge
(Ms. S. Puvaneswari AP/ CSE)


3/5/24
HoD/ CSE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

ATTENDANCE SHEET- INTERNAL STAFF SEMINAR

Date: 07.05.2024

Resource Person: Ms. T. Sindhu

Topic :Cloud Computing

S. NO	STAFF NAME	SIGNATURE
1.	Dr. S. M. Uma	
2.	Dr. K. Abhirami	K. Abhirami 7/5/24
3.	S. Puvaneswari	S. Puvaneswari 7/5/24
4.	S. Rajarajan	
5.	R. Suganthalakshmi	
6.	M. Arun	
7.	S. Priyadharshini	S. Priyadharshini 7/5/24
8.	N. Dhamayandhi	
9.	S. Abikayil Aarthi	S. Abikayil Aarthi 7/5/24
10.	B. Bavithra	
11.	Dr. S. Kannan	S. Kannan
12.	Ms. M. Kavitha	
13.	Ms. D. Mangalambigai	
14.	Ms. K. Abinaya	
15.	Ms. B. Sangeetha	

16. Ms. T. Abitha Kupelambal

T. Sindhu 7/5/24

17. Ms. M. Vidhya

M. Vidhya 7/5/24



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

INTERNAL STAFF SEMINAR REPORT

Department of Computer Science & Engineering organized an internal staff seminar on 07.05.2024 at smart classroom.

OBJECTIVE

The objective of this seminar is to gain the insight knowledge about Android basis with compose.

SESSION DETAILS

The seminar for the faculties of Computer Science & Engineering department was conducted on 07.05.2024 from 12.30 P.M. to 01.15 P.M.in Smart Classroom. Ms. T. Sindhu explained about basics of "Cloud Computing".The seminar on "Cloud Computing" was organized to educate internal staff about the fundamentals of cloud computing, its various models, and practical applications in the organization. With the growing reliance on cloud-based solutions, this seminar aimed to enhance understanding and promote effective adoption of cloud technologies.

Key Takeaways

- Cloud computing provides scalable and cost-effective solutions for data storage, computation, and collaboration.
- Different service models (IaaS, PaaS, SaaS) cater to varying business needs.
- Security and compliance are critical considerations for successful cloud adoption.
- Real-time collaboration tools and data analytics are key drivers of cloud adoption within organizations.

The seminar provided valuable insights into the fundamentals and applications of cloud computing. It empowered staff with the knowledge needed to leverage cloud technologies effectively, enhancing organizational efficiency and innovation.


Coordinator
(S. Purnavathi AP/ CSE)


HoD/ CSE



DEPARTMENT OF COMPUTER SCIENCE AND ENGINEERING

ACADEMIC YEAR 2023- 2024

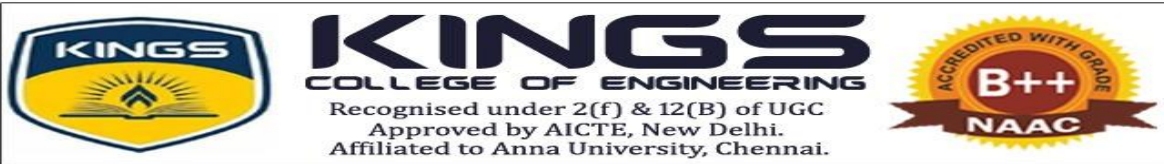
FEEDBACK SHEET- INTERNAL STAFF SEMINAR

Date: 07.05.2024

Resource Person: Ms. T. Sindhu

Topic :Cloud Computing

S. NO	STAFF NAME	FEEDBACK COMMENTS	SIGNATURE
1.	Dr.S.M.Vma	Presentation is good	[Signature]
2.	K.Abhinavi	Informative Session	[Signature]
3.	M. ARUN	Good session	[Signature]
4.	S. AbiKajal Anthe	Good	[Signature]
5.	B. Baitha	Nice	[Signature]
6.	S. Sangeetha	Good	[Signature]
7.	M. Kanika	Very useful	[Signature]
8.	T. Abitha Kujal	Informative session	T. Abitha Kujal
9.	M. Vidhya	Very interesting session	M. Vidhya
10.	S. Kannan	Good	S. Kannan
11.	S. Rajarajan	Nice	[Signature]

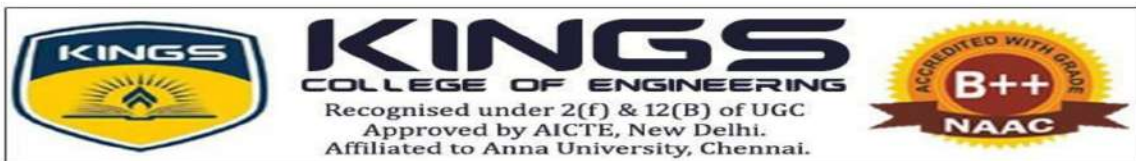


DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-2024

Internal Staff Seminar





DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-24

INTERNAL STAFF SEMINAR- SUMMARY

S.No	Date	Title of the Seminar	Name of the Staff	Number of Participants
1.	13.04.2024	Solutions of Soil Moisture Sensing with RFID for Landslide Monitoring.	Mr.R.Thandayathapani, AP/ECE	10
2.	18.10.2023	Automatic Bottle Filling and Capping System Using PLC	Mrs.U.Jeyamalar, AP/ECE	07

A.H. 14/8/24

STAFF INCHARGE

14/8/24

HOD/ECE

J. Praveen 14/8/24

PRINCIPAL

H.O.D.
ELECTRONICS AND COMMUNICATION ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNALKULAM - 613 303.
GANDYAKOTTAI TALUK, PUDUKOTTAI DISTRICT

Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303



KINGS
COLLEGE OF ENGINEERING

Recognised under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-24

INTERNAL STAFF SEMINAR- CIRCULAR

Date: 12-04-2024

This is to inform you that, the first internal staff seminar for the academic year 2023-24 even semester is scheduled on 13-04-2024 (Saturday) at 03.30 pm. All the staff members are requested to attend the seminar.

Venue: ECE Smart Classroom.

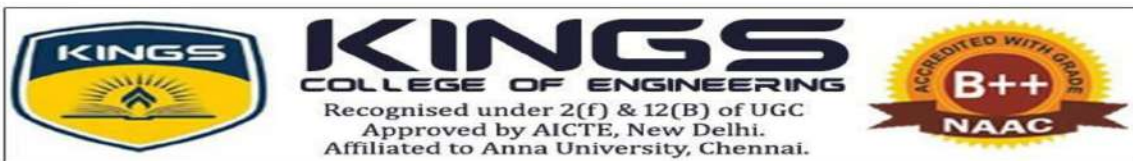
The details of the seminar are as follows:

Name of the Resource person: Mr.R.Thandayathapani, AP/ECE

Topic of the Seminar: Solutions of Soil Moisture Sensing with RFID for Landslide Monitoring.

Staff Incharge

HOD/ECE



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-24(EVEN SEM)

IEEE STUDENT BRANCH STB 16621- JUNE, 2023

INTERNAL STAFF TECHNICAL SEMINAR

16.04.2024

Summary of the seminar:

Department of Electronics and Communication Engineering in association with IEEE student branch (16621) organized an Internal staff technical Seminar on **13.04.2024**.

The main objective of this internal staff technical seminar is to:

- Provide a platform and to get exposure in the recent trends of Electronics and Communication Engineering.
- Improve the performance of all the Staff members at all levels.
- Identify the persons in the department with the required potential and prepare them for higher positions in future.
- Prevent stagnation of faculty by exposing them to the latest concepts and techniques in their respective areas of specialization.

Mr.N.Mangaiyarkarasi, HOD/ECE welcomed the gatherings. **Mr.R.Thandayathapani**, Assistant Professor/ECE delivered a lecture in the topic of **“Solutions of Soil Moisture Sensing with RFID for Landslide Monitoring”**.

Online Journal Paper Referred:

Sérgio Francisco Pichorim , Nathan J. Gomes , John C. Batchelor, "Two Solutions of Soil Moisture Sensing with RFID for Landslide Monitoring," in sensors journal, vol. 18, 2018, doi:10.3390/s18020452

Aim and the themes discussed:

- This seminar revolves around leveraging **advanced sensing technologies (RFID)** to address **geological and environmental challenges** like landslides.
- This seminar Integrating **RFID-based sensors** with soil moisture monitoring for **proactive disaster management**.

Outcome:

- Attendees may gained knowledge how integrating RFID with IoT can provide real-time monitoring and alerts for early landslide prediction.

- The seminar will inspire researchers and engineers to explore innovative solutions combining RFID technology with other sensing systems for natural disaster mitigation.
- Overall the seminar was helpful for the future researchers, who have the interest to work and make advancements in the field to gain insight into the topic.



Mr.R.Thandayathapani , AP/ECE delivering the lecture

A.H. 14/8/24

Staff in charge

[Signature]
14/8/24

HOD

[Signature]
14/8/24

Principal

H.O.D.
ELECTRONICS AND COMMUNICATION ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNAIKULAM - 613 303.
GANDAYAKOTTAI TALUK, PUDUKOTTAI DISTRICT

Principal
Kings College of Engineering
(Autonomous)
Punaiikulam - 613 303



KINGS
COLLEGE OF ENGINEERING

Recognised under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-24

INTERNAL STAFF SEMINAR- CIRCULAR

Date: 16-10-2023

This is to inform you that, the second internal staff seminar for the academic year 2023-24 even semester is scheduled on 18-10-2023 (Wednesday) at 03.30 pm. All the staff members are requested to attend the seminar.

Venue: ECE Smart Classroom.

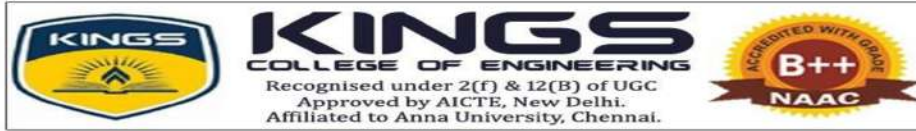
The details of the seminar are as follows:

Name of the Resource person: Mrs.U.Jeyamalar, AP/ECE

Topic of the Seminar: Automatic Bottle Filling and Capping System Using PLC.


P. N.
Staff Incharge


HOD/ECE 16/10/23



DEPARTMENT OF ELECTRONICS AND COMMUNICATION ENGINEERING

ACADEMIC YEAR 2023-24(ODD SEM)

IEEE STUDENT BRANCH STB 16621- JUNE, 2023

INTERNAL STAFF TECHNICAL SEMINAR

20.10.2023

Summary of the seminar:

Department of Electronics and Communication Engineering in association with IEEE student branch (16621) organized an Internal staff technical Seminar on **18.10.2023**.

The main objective of this internal staff technical seminar is to:

- Provide a platform and to get exposure in the recent trends of Electronics and Communication Engineering.
- Improve the performance of all the Staff members at all levels.
- Identify the persons in the department with the required potential and prepare them for higher positions in future.
- Prevent stagnation of faculty by exposing them to the latest concepts and techniques in their respective areas of specialization.

Mr.N.Mangaiyarkarasi, HOD/ECE welcomed the gatherings. **Mrs.U.Jeyamalar**, Assistant Professor/ECE delivered a lecture in the topic of "**Automatic Bottle filling and Capping System Using PLC**".

Online Journal Paper Referred:

Dr. Pankaj Prajapati, Sachin Singh, Saurabh Gupta, Shivani Srivastava" Automatic Bottle Filling and Capping System Using PLC," in IRJET journal, vol. 06, 2019.

Aim and the themes discussed:

- This seminar to explore the design, implementation, and functionality of a Programmable Logic Controller (PLC)-based automation system used for the precise and efficient filling and capping of bottles in industrial production lines
- The seminar will focus on the technological advancements, operational principles, and practical applications of such systems, as well as their role in improving productivity, reducing human error, and ensuring quality control in the manufacturing process.

Outcome:

- Attendees will be equipped with the knowledge and skills to design, implement, or optimize automated bottle filling and capping systems in industrial settings.
- The seminar will have a well-rounded understanding of the technical and practical aspects of PLC-based automation, preparing them to contribute to or lead automation projects in industrial environments.
- Overall the seminar was helpful for the future researchers, who have the interest to work and make advancements in the field to gain insight into the topic.

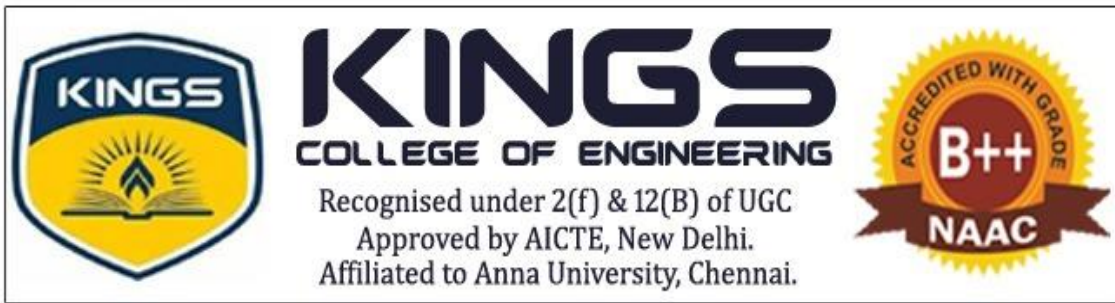


Mrs.U.Jeyamalar, AP/ECE delivering the lecture

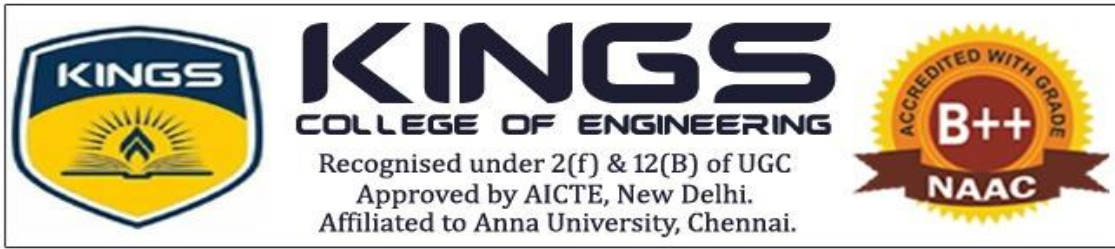
A.H. 5/12/23
Staff in charge

[Signature]
5/12/23
HOD
H.O.D.
ELECTRONICS AND COMMUNICATION ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNALKULAM - 613 303.
GANDAPPAKOTTAI TAMIL PUDUKKOTTAI DISTRICT

[Signature]
05/12/2023
Principal
PRINCIPAL
Kings College of Engineering
PUNALKULAM - 613 303.



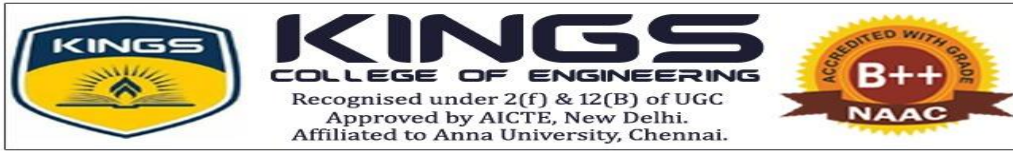
**DEPARTMENT OF
ELECTRICAL & ELECTRONICS
ENGINEERING**



ACADEMIC YEAR
2023-2024

INTERNAL STAFF SEMINAR





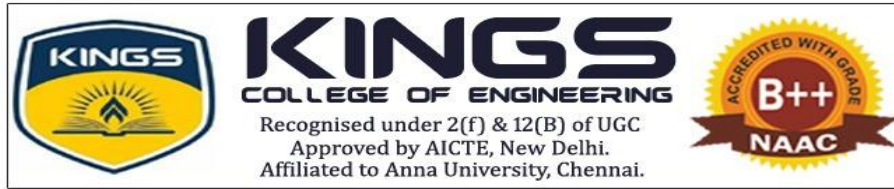
NUMBER OF PROFESSIONAL DEVELOPMENT /ADMINISTRATIVE TRAINING PROGRAMS ORGANIZED BY THE INSTITUTION FOR TEACHING AND NON TEACHING STAFF ACADEMIC YEAR 2023-2024

S. No	Dates (DD-MM-YYYY)	Title of the Professional Development Program Organized for Teaching Staff	No. of Participants
Academic Year 2023-2024 (ODD)			
1.	29.09.2023	Seminar on “ Hybrid Common-mode EMI Filter Design for Electric Vehicle Traction”	8
2.	30.09.2023	Seminar on “Study of PD Signatures in Transformer Using Lightning Impulse Voltage Analysis”	8
3.	23.11.2023	Seminar on “Analysis and Realization of hybrid AC/DC Micro grid with interlink converter”	8
4.	16.12.2023	Seminar on “ Development of a Battery Management System with Special Focus on Capacity Estimation and Thermal Management”	8
Academic Year 2023-2024 (EVEN)			
5.	29.04.2024	Seminar on “A Novel E-Nose System for the Characterization of Dissolved Gases in Dielectric Oils”	6
6.	28.03.2024	Seminar on “ Techno-Economic and Power System Optimization of a Renewable Rich Islanded Micro grid Considering Different Dispatch Strategies”	6
7.	29.02.2024	Seminar on “ DC Micro-grids and Distribution Systems – A Research Perspective”	6

G. Jayaram
Faculty In-Charge

Sundaramoerthi
5/1/24
HOD/EEE
Mr. R. Sundaramoerthi
HOD - EEE
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303

S. Prasad
14/8/24
PRINCIPAL
Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303



**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
Academic Year 2023-24 (Odd Semester)**

Internal IEEE Faculty Seminar Report

Title of the seminar : Hybrid Common-mode EMI Filter Design for Electric Vehicle Traction Inverters
Date : 29.09.2023
Resource Person : Dr.P. Narasimman, Assistant Professor/EEE, KCE
Beneficiaries : EEE Faculty Members- 8
Venue : EEE – Smart Classroom

On behalf of the Department of EEE and IEEE Branch organized an Internal Seminar on “Hybrid Common-mode EMI Filter Design for Electric Vehicle Traction Inverters” for the faculty members of EEE Department on 29.09.2023. The main objective of the internal seminar is to provide an exposure to our faculty members on EMI filter design for electric vehicle traction.

The following points were discussed during the session:

- The switching actions of power semiconductor devices, such as IGBTs or MOSFETs, generate differential mode (DM) and common mode (CM) electromagnetic interference (EMI) voltages or currents flowing through the power source.
- EMI noise spreads widely in the frequency range of 150 kHz to 108 MHz, as specified in the CISPR 25:2016 standard.
- The equivalent CM circuit with the current-sensing current-compensating (CSCC) AEF, with which the CM current is sensed, amplified, and then injected into the main circuit so that the CM noise flowing through the LISN is ideally cancelled.
- The sensed signal from the CT is then fed to the amplifier stage, which is implemented as a current-controlled current source that mainly comprises an operational amplifier (op-amp) circuit and a class AB amplifier formed by the NPN and PNP transistors.
- The active filter stage is only appropriate for compensating for the low- and medium-frequency CM noise owing to the limited bandwidth of the actual op-amp and class AB amplifier.

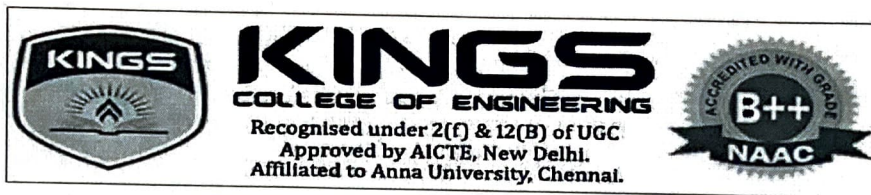
References:

1. G L Skibinski, R J Kerkman, D Schlegel. EMI emissions of modern PWM AC drives. IEEE Industry Applications Magazine, 1999, 5(6): 47-80.
2. Y Murai, T Kubota, Y Kawase. Leakage current reduction for a high-frequency carrier inverter feeding an induction motor. IEEE Transactions on Industry Applications, 1992, 28(4): 858-863.
3. Di Han, Silong Li, Yujiang Wu. Comparative analysis on conducted CM EMI emission of motor drives: WBG versus Si devices. IEEE Transactions on Industrial Electronics, 2017, 64(10): 8353-8363.
4. B Narayanasamy, F Luo. A survey of active EMI filters for conducted EMI noise reduction in power electronic converters. IEEE Transactions on Electromagnetic Compatibility, 2019, 61(6): 2040-2049.
5. S Ogasawara, H Akagi. Modeling and damping of high-frequency leakage currents in PWM inverter-fed AC motor drive systems. IEEE Transactions on Industry Applications, 1996, 32(5): 1105-1114.
6. International Electrotechnical Committee. Vehicles, boats and internal combustion engines- Radio disturbance characteristics-Limits and methods of measurement for the protection of onboard receivers. CISPR 25, 2016.
7. X Li, S S Williamson. Assessment of efficiency improvement techniques for future power electronics intensive hybrid electric vehicle drive trains. 2007 IEEE Canada Electrical Power Conference, October 25-26, 2007, Montreal, QC, Canada. IEEE, 2007: 268-273.
8. A Vedde, M Neuburger, C Cheshire, et al. Optimization of a passive common mode EMI filter by adding an active feedback loop. 2021 IEEE Southern Power Electronics Conference (SPEC), December 6-9, 2021, Kigali, Rwanda. IEEE, 2021: 1-6.
9. A Emadi, Y J Lee, K Rajashekara. Power electronics and motor drives in electric, hybrid electric, and plug-in hybrid electric vehicles. IEEE Transactions on Industrial Electronics, 2008, 55(6): 2237-2245.


Staff Incharge


HoD/EEE 5/10/23


Principal 07/10/2023



**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 ODD**

Internal IEEE Seminar - Report

Title of the seminar	: Study of PD Signatures in Transformer Using Lightning Impulse Voltage Analysis
Date	: 30.09.2023
Resource Person	: Dr. G. Suganya, AP/EEE, KCE
Beneficiaries	: EEE Faculty Members- 7
Venue	: EEE – Smart Classroom

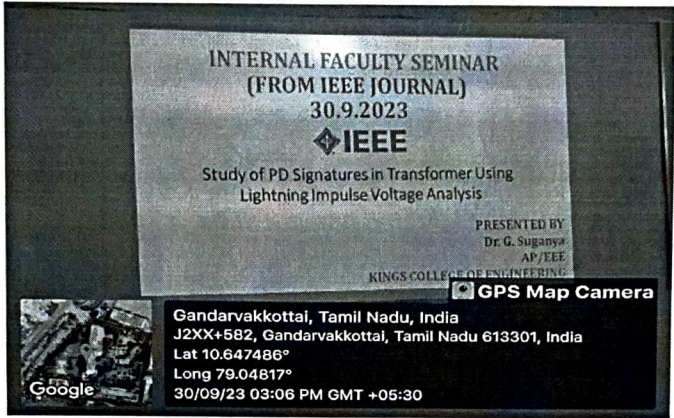
On behalf of Department of EEE, IEEE Branch has organized Internal Seminar on "*Study of PD Signatures in Transformer Using Lightning Impulse Voltage Analysis*" for faculty members, Department of EEE on **30.09.2023**. The main objective of the internal seminar is to provide exposure to various research areas to our faculty members.

The following points were discussed during the session:

- The critical importance of monitoring insulation in transformers.
- The crucial significance of Partial Discharge (PD) as an indicator of insulation deterioration.
- The need for early and accurate detection and localization of PD to prevent catastrophic failures.
- Diagnostic methods, including traditional AC voltage, impulse voltage, and their combined use.
- Challenges in analyzing PD signals, such as complex nonlinearity and non-stationarity.
- The effective introduction to the Hilbert-Huang Transform (HHT) for PD signals analysis.
- Advantages of HHT in capturing highly dynamic nonlinear and non-stationary characteristics.
- Explanation of Holo-Hilbert Spectral Analysis (HHTSA) as an advanced extension of HHT.
- In-depth details of the experimental setup and methodology.
- Presentation of comprehensive experimental results, including HHTSA spectra.
- Comparison of HHTSA with traditional and established time-frequency techniques.

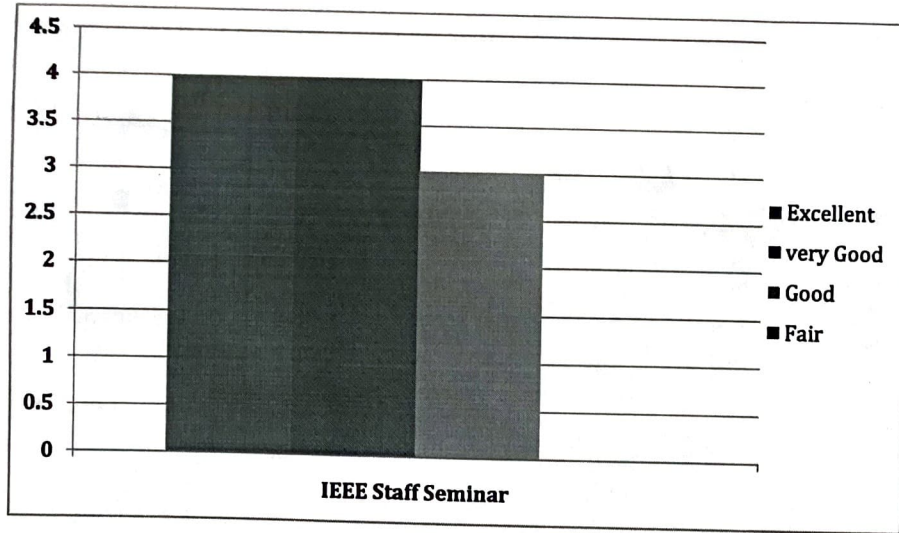
Conclusions:

In conclusion, the seminar underscored the importance of monitoring transformer insulation for dependable operation. It highlighted the role of Partial Discharge (PD) in detecting insulation deterioration and the need for early PD detection to prevent failures. Various diagnostic methods, including AC voltage, impulse voltage, and their combination, were discussed. Despite challenges like nonlinearity and non-stationarity in PD signals, the Hilbert-Huang Transform (HHT) and its advanced extension, Holo-Hilbert Spectral Analysis (HHSA), were introduced for effective signal analysis. The seminar addressed the experimental setup and compared HHSA with traditional techniques. It offered insights into advanced methods for ensuring long-term safety and efficiency in electrical power systems.



Snapshot from Seminar

Feedback Analysis:



References:

1. S. Govindarajan, M. Natarajan, J. A. Ardila-Rey, and S. Venkatraman, "Partial discharge location identification using permutation entropy based instantaneous energy features," IEEE Trans. Instrum. Meas., vol. 70, pp. 1-12, 2021.
2. X. Chen and Y. Yang, "Analysis of the partial discharge of ultrasonic signals in large motor based on Hilbert-Huang transform," Appl. Acoust., vol. 131, pp. 165-173, Feb. 2018.
3. K. Arunachalam, B. Madanmohan, and R. Rajamani, "Extended application for the impulse-based frequency response analysis: Preliminary diagnosis of partial discharges in transformer," IEEE Access, vol. 8, pp. 226897-226906, 2020.

G. S. Srinivas
11/10/23
Faculty In-Charge

A. Arunachalam
11/10/23
HOD/EEE

S. Prasad
11/10/2023
Principal



**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 ODD**

Internal IEEE Seminar- Report

Title of the seminar	: Analysis and Realization of Hybrid AC/DC Microgrid with Interlink Converter
Date	: 23.11.2023
Resource Person	: Dr. S. Vasantharaj, AP/EEE, KCE
Beneficiaries	: EEE Faculty Members -9
Venue	:EEE - Smart Classroom

On behalf of Department of EEE, IEEE Branch has organized Internal Seminar on "*Analysis and Realization of Hybrid AC/DC Microgrid with Interlink Converter*" for faculty members, Department of EEE on **23.11.2023**. The main objective of the internal seminar is to provide exposure to various research areas to our faculty members.

The following points were discussed during the session:

- Investigate the seamless integration of AC and DC components within a microgrid framework.
- Assess the overall performance of the hybrid microgrid, focusing on power distribution, reliability, and stability.
- Analyze and understand the specific role of the interlink converter in facilitating communication and power flow between AC and DC components.
- Evaluate the efficiency of the hybrid microgrid system, considering energy losses, conversion processes, and overall system effectiveness.
- Explore how the hybrid microgrid accommodates and optimizes the integration of renewable energy sources, such as solar or wind power.
- Investigate how the hybrid AC/DC microgrid, with the interlink converter, enhances the reliability and resilience of the overall power distribution system.
- Develop and implement optimization strategies for the microgrid, with a focus on achieving efficient energy utilization and management.

- Identify and propose any novel technological advancements or innovations that contribute to the efficiency and effectiveness of the hybrid microgrid system.
- Address and propose solutions for any operational challenges encountered in the integration and functioning of the hybrid AC/DC microgrid.
- Perform a comprehensive cost-benefit analysis to evaluate the economic feasibility of implementing a hybrid AC/DC microgrid, considering initial setup costs, operational expenses, and long-term benefits.

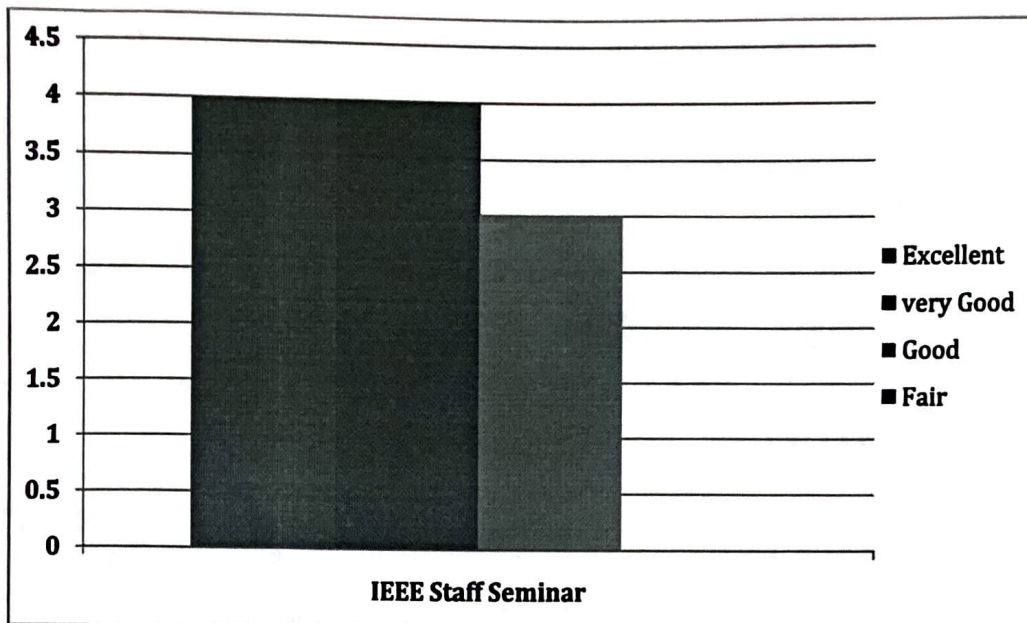
Conclusions:

In conclusion, our investigation into a Hybrid AC/DC Microgrid with Interlink Converter has shown that integrating different components in a microgrid works well. The interlink converter played a crucial role in making communication and power exchange between AC and DC elements smooth. The hybrid microgrid proved to be efficient, offering optimized power distribution. We successfully integrated renewable energy sources, making the system adaptable to sustainable practices. Real-world testing confirmed that our proposed system is practical. The microgrid's enhanced reliability and stability contribute significantly to robust power distribution. It's also scalable for different power needs, and a thorough cost-benefit analysis indicates its economic feasibility. Our compliance with regulations ensures a safe and lawful deployment framework. This research advances our knowledge of hybrid AC/DC microgrid technology, providing useful insights for future developments in sustainable and efficient energy distribution systems.



Snapshot from Seminar

Feedback Analysis:



References:

1. Hou, X., Sun, K., Zhang, N., Teng, F., Zhang, X., & Green, T. C. (2021). Priority-driven self-optimizing power control scheme for interlinking converters of hybrid AC/DC microgrid clusters in decentralized manner. *IEEE Transactions on Power Electronics*, 37(5), 5970-5983.
2. Faith Cingoz, Ali Elrayyah and Yilmaz Sozer. Optimized Resource Management for PV-Fuel-cell-based microgrids using load characterizations. *IEEE Trans. Ind. Appl.* 2016; 52 (2): 1723-1735.
3. Ramon Zamora and Anurag K. Srivastava, Multi-Layer Architecture for Voltage and Frequency Control in Networked Microgrids. *IEEE Transactions on Smart Grid* 2018;9(3): 2076-2085.
4. Zolfaghari, M., Abedi, M., & Gharehpetian, G. B. (2019). Power flow control of interconnected AC-DC microgrids in grid-connected hybrid microgrids using modified UIPC. *IEEE Transactions on Smart Grid*, 10(6), 6298-6307.


Faculty In-Charge


HOD/EEE 28/11/23


Principal



KINGS
COLLEGE OF ENGINEERING
Recognised under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.



DEPARTMENT OF ELECTRICAL AND ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-2024(ODD)

IEEE -INTERNAL FACULTY SEMINAR REPORT

❖ **Introduction:**

Department of EEE in association with IEEE has organized Internal Seminar on “**Development of a Battery Management System with Special Focus on Capacity Estimation and Thermal Management** “ on 16.12.2023.

❖ **Venue:**

Smart Class room: Time :(2.30 p.m-3.30p.m)

❖ **Resource Person (Internal):**

Mr.R.Sundaramoorthi, Assistant Professor/EEE

❖ **Objectives:**

The main objective of the seminar is

- To provide an overview of Power Electronics based safety enhancement technologies for LIBs, mainly focusing on Capacity Estimation.
- To introduces the latest advances in battery protection, balancing, monitoring and lifetime improvement, all based on PE technologies
- To give basic research areas of battery Management systems and capacity estimation such as SOC, SOH analysis.

❖ **Presentation outlines:**

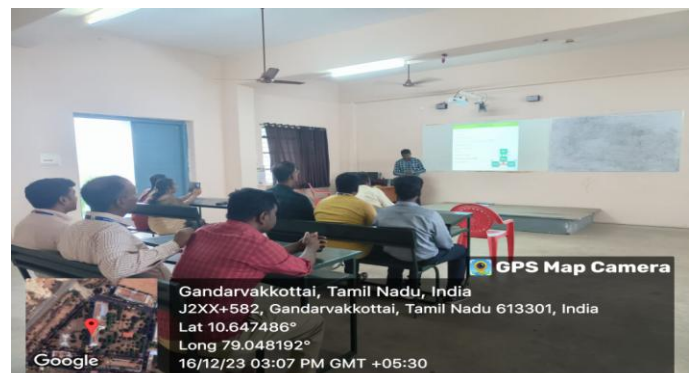
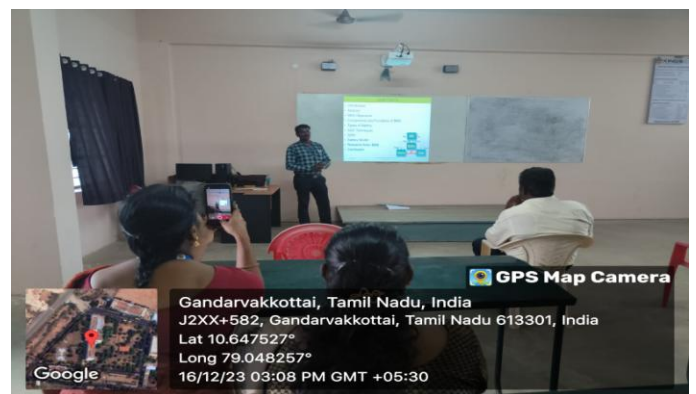
- Introduction
- Overview of Battery Management systems
- Capacity Estimation and types
- Thermal Management and Research Areas.

The following points are discussed during presentation.

- During his session, he started with basic Introduction about converter topologies and the importance of Electric and Hybrid Electric vehicles. He pointed out that, the large number of automobiles in use around the world has caused and continues to cause serious problems of environment and human life. Air pollution, global warming, and the rapid depletion of the earth's petroleum resources are now serious problems. Electric Vehicles (EVs), Hybrid Electric Vehicles (HEVs) and Fuel Cell Electric Vehicles (FCEVs) have been typically proposed to replace conventional vehicles in the near future.
- This presentation proposes a battery management system which uses a "low-order" physics-based battery model that estimates capacity and optimally manages the temperature of the battery. A capacity estimation methodology is proposed that uses the state of charge estimate from an Extended Kalman filter and the inverse of the coulomb counting equation to estimates the "instant" capacity of the battery. This instant value is then used in an averaging calculation that uses saturation limits and a time delay to obtain a value for the capacity that is representative of the battery. This value is then feedback into the kalman filter. The capacity estimate obtained through this method was between 2 and 8% off of the true value.
- Lithium ion batteries are instrumental in tackling the challenges of global warming. They have shown great utility in electric and hybrid vehicles. However, challenges with regard to performance and safety such as capacity fade and thermal runaway need to be accounted for in the implementation of these battery systems. One way is through battery management systems that monitor and control various aspects of the battery's operation. At the heart of the battery management system is an analytical model of the battery.
- A thermal management system is also proposed that optimally controls a fan to cool a lithium ion battery. The system was developed and tested in a simulated environment. First, the fan model was integrated with the battery model and simulations were run to test the open loop temperature response of the battery to the fan cooling while varying the input voltage of the fan the current demanded of the battery. From this data an operating point was chosen, the system was linearized, and a linear quadratic controller was designed and implemented.

- The controller was sluggish when faced with a temperature perturbation in the absence of a current demand increase but drove the temperature change to zero. In the presence of a current change, the controller drove the state to a nonzero steady state value. The same result occurred when a disturbance rejection mechanism was applied to the controller. Energy storage or supply devices vary their output voltage with load or state of charge and the high voltage of the DC-link create major challenges for vehicle designers when integrating energy storage / supply devices with a traction drive .Various methodologies were attempted to estimate capacity with mixed results. These include Joint extended Kalman filter, dual extended Kalman filter and Dual Unscented Kalman Filter.
- Introduced about research areas on Electric vehicles such as cell balancing techniques, State of charge methods, State of Health and wireless charging techniques. He has briefed about the different techniques of estimating state of charge, state of health mechanisms and applications. He mentioned detailed explanation about all the methods of balancing techniques safe operating Area of different types of cells .Finally he pointed out what are the current research areas in battery Electric vehicles and Battery Management systems.

SNAPSHOTS



Mr.R.Sundaramoorthi AP/EEE delivering lecture during internal faculty Seminar

❖ **REFERENCES:**

[1] R. RANJITH KUMARC. BHARATIRAJA (SENIOR MEMBER, IEEE), K. UDHAYAKUMAR , S. DEVAKIRUBAKARAN, K. SATHIYA SEKAR, AND LUCIAN MIHET-POPA(SENIOR MEMBER, IEEE), "ADVANCES IN BATTERIES, BATTERY MODELING, BATTERY MANAGEMENT SYSTEM, BATTERY THERMAL MANAGEMENT, SOC, SOH, AND CHARGE/DISCHARGE CHARACTERISTICS IN EV APPLICATIONS" IEEE ACCESS, VOLUME 11, OCTOBER, 2023.

[2] ZHAOYANG ZHAO , MEMBER, IEEE, HAITAO HU , (SENIOR MEMBER, IEEE), ZHENGYOU HE , (SENIOR MEMBER, IEEE), HERBERT HO-CHING IU ,(SENIOR MEMBER, IEEE), POOYA DAVARI , (SENIOR MEMBER, IEEE), AND FREDERIK BLAABJERG , (FELLOW, IEEE)" POWER ELECTRONICS-BASED SAFETY ENHANCEMENT TECHNOLOGIES FOR LITHIUM-ION BATTERIES: AN OVERVIEW FROM BATTERY MANAGEMENT PERSPECTIVE" IEEE TRANSACTIONS ON POWER ELECTRONICS, VOL. 38, NO. 7, JULY 2023


[3] MOLLA SHAHADAT HOSSAIN LIPU , MD. SAZAL MIAH , SHAHEER ANSARI , SAFAT B. WALI TASKIN JAMAL , RAJVIKRAM MADURAI ELAVARASAN, SACHIN KUMAR,M. M. NAUSHAD ALI, MAHIDUR R. SARKER , A. ALJANAD AND NADIA M. L. TAN "SMART BATTERY MANAGEMENT TECHNOLOGY IN ELECTRIC VEHICLE APPLICATIONS: ANALYTICAL AND TECHNICAL ASSESSMENT TOWARD EMERGING FUTURE DIRECTIONS",MDPI, BATTERIES 2022,

OUTCOME:

- Faculty will able to highlight basic research areas on Battery Management Systems and thermal Management systems.
- Able to understand the different types of Battery Management Functions and methods to observe applications in this field.
- Learn how to model battery with simulink tool boxes.


FACULTY INCHARGE
18/12/2023


HOD/EEE
18/12/23


PRINCIPAL
18/12/2023



DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING

ACADEMIC YEAR 2023-24EVEN

Internal IEEE Seminar- Report

Title of the seminar	:A Novel E-Nose System for the Characterizationof Dissolved Gases in Dielectric Oils
Date	: 29.04.2024
Resource Person	: Dr. G. Suganya, AP/EEE, KCE
Beneficiaries	: EEE Faculty Members- 7
Venue	:EEE – Smart Classroom

On behalf of Department of EEE, IEEE Branch has organized Internal Seminar on “*A Novel E-Nose System for the Characterizationof Dissolved Gases in Dielectric Oils*” for faculty members, Department of EEE on **29.04.2024**. The main objective of the internal seminar is to provide exposure to various research areas to our faculty members.

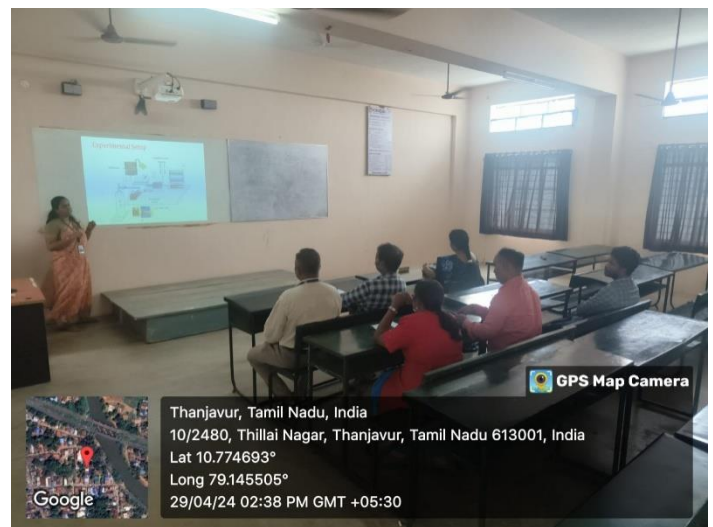
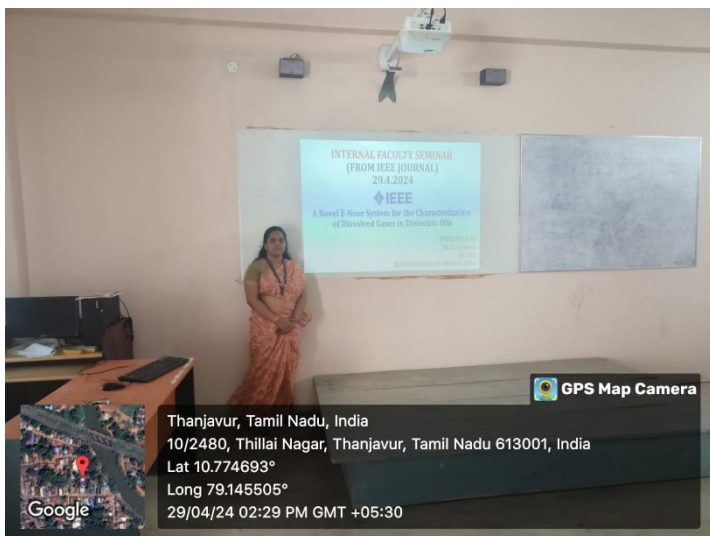
The following points were discussed during the session:

- The introduction of a novel E-nose system equipped with eight metal oxide semiconductor (MOS) gas sensors to measure dissolved gases in liquid insulation systems, particularly in oil-filled electricity equipment like power transformers.
- Different technologies for Dissolved Gas Analysis (DGA) of dielectric oils exist, such as Gas Chromatography (GC), Photoacoustic Spectroscopy (PAS), Infrared (IR) spectroscopy, and micro-electronic sensors, each with its advantages and limitations.
- The exceptional performance of proposed E-nose system in differentiating mineral oil samples based on the type and concentration of predominant gases, offering a cost-effective and efficient solution for routine monitoring and diagnosis of liquid insulation systems.

- The system's response in samples with similar gas contents, which is beneficial for evaluating the evolution of gases over time, showcasing its potential for assessing the condition of liquid insulation systems in electrical assets.
- The need for more affordable and generalized gas monitoring systems in the electricity sector to extend the life of critical components like power transformers, emphasizing the importance of innovative approaches like the E-nose system.

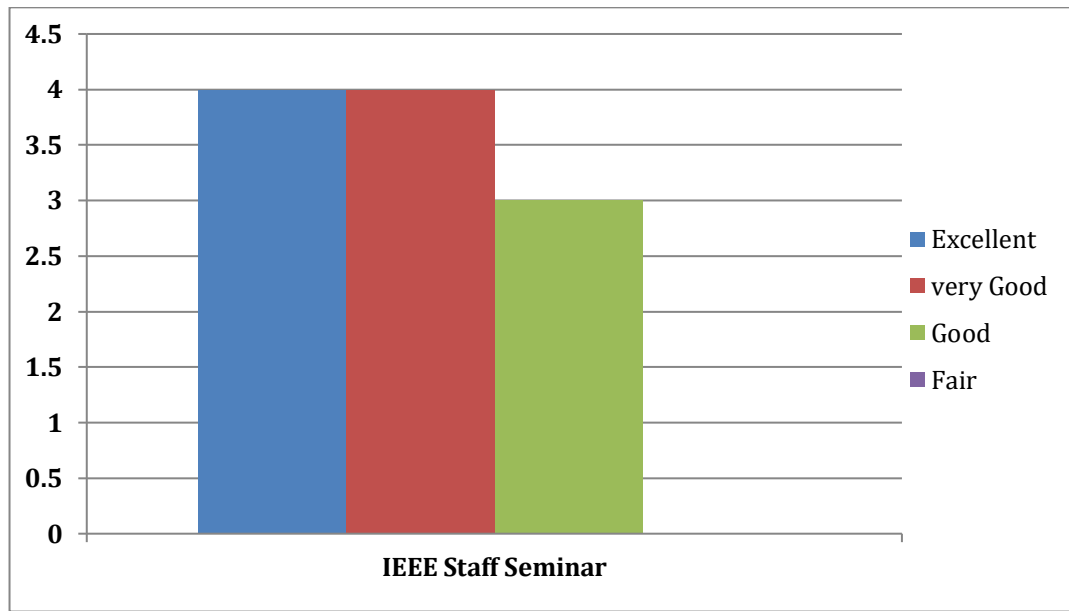
Conclusions:

In conclusion, the development of a novel E-nose system has been presented, showcasing its capability to effectively differentiate dielectric oil samples with varying types and concentrations of dissolved gases. The results validate the system's effectiveness in discerning between oil samples based on dissolved gas content variations or prevailing gas types during measurement. Furthermore, the system's consistent response in samples with similar gas contents highlights its utility for tracking gas evolution over time, thereby enhancing the reliability of liquid insulation systems in electrical assets. This seminar outcome underscores the potential of the E-nose system as a cost-effective and efficient tool for routine monitoring and diagnosis, offering significant benefits for extending the lifespan of critical equipment in the electricity sector.



Snapshot from Seminar

Feedback Analysis:



References:

1. J. A. Ardila-Rey, M. P. Cerda-Luna, C. B. Muñoz, B. A. de Castro and S. Govindarajan, "A Novel E-Nose System for the Characterization of Dissolved Gases in Dielectric Oils," in IEEE Transactions on Instrumentation and Measurement, vol. 72, pp. 1-16, 2023, Art no. 6009316.
2. M. Meira, C. Verucchi, R. Álvarez and L. Catalano, "Dissolved Gas Analysis in Mineral Oil and Natural Ester Liquids from Thermal Faults," in IEEE Transactions on Dielectrics and Electrical Insulation, vol. 28, no. 4, pp. 1317-1325, August 2021.

G. J. S. M.
16/5/24
Faculty In-Charge

Prof. Amrutha
16/05/2024
HOD/EEE

J. Praveen
16/5/2024
Principal

**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24 EVEN**

Internal IEEE Seminar- Report

Title of the seminar	: Techno-Economic and Power System Optimization of a Renewable Rich Islanded Microgrid Considering Different Dispatch Strategies
Date	: 28.03.2024
Resource Person	: Dr.S. Naveen Prakash, AP/EEE, KCE
Beneficiaries	: EEE Faculty Members –9
Venue	: EEE – Smart Classroom

On behalf of Department of EEE, IEEE Branch has organized Internal Seminar on *“Techno-Economic and Power System Optimization of a Renewable Rich Islanded Microgrid Considering Different Dispatch Strategies”* for faculty members, Department of EEE on **28.03.2024**. The main objective of the internal seminar is to provide exposure to various research areas to our faculty members.

The following points were discussed during the session:

Techno-Economic Optimization:

- Technological Aspects: This includes the selection and integration of various renewable energy technologies (solar, wind, battery storage) within the microgrid.
- Economic Aspects: This involves cost analysis, including capital expenditure (CAPEX), operational expenditure (OPEX), and cost-benefit analysis to ensure economic feasibility and sustainability.

Power System Optimization:

- Grid Stability and Reliability: Ensuring that the microgrid can reliably meet the energy demand without grid connection. This involves managing fluctuations in power generation and load demand.
- Load Management: Strategies for optimizing load distribution and ensuring efficient use of available resources.

Renewable Rich Islanded Microgrid:

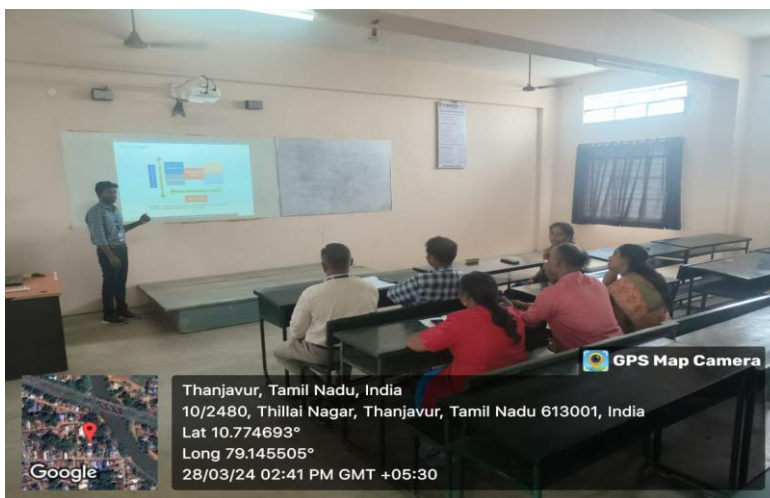
- Renewable Energy Integration: Emphasizing the role and challenges of incorporating a high percentage of renewable energy sources in an isolated microgrid.
- Islanded Operation: Focus on the microgrid's ability to operate independently from the main power grid, which involves unique challenges in maintaining stability and reliability.

Different Dispatch Strategies:

- Dispatch Algorithms: Examination of various algorithms and strategies for managing energy production and distribution, such as load-following, demand response, and predictive dispatch.
- Optimization of Resources: Balancing the use of different energy sources and storage systems to minimize costs and maximize efficiency and reliability.

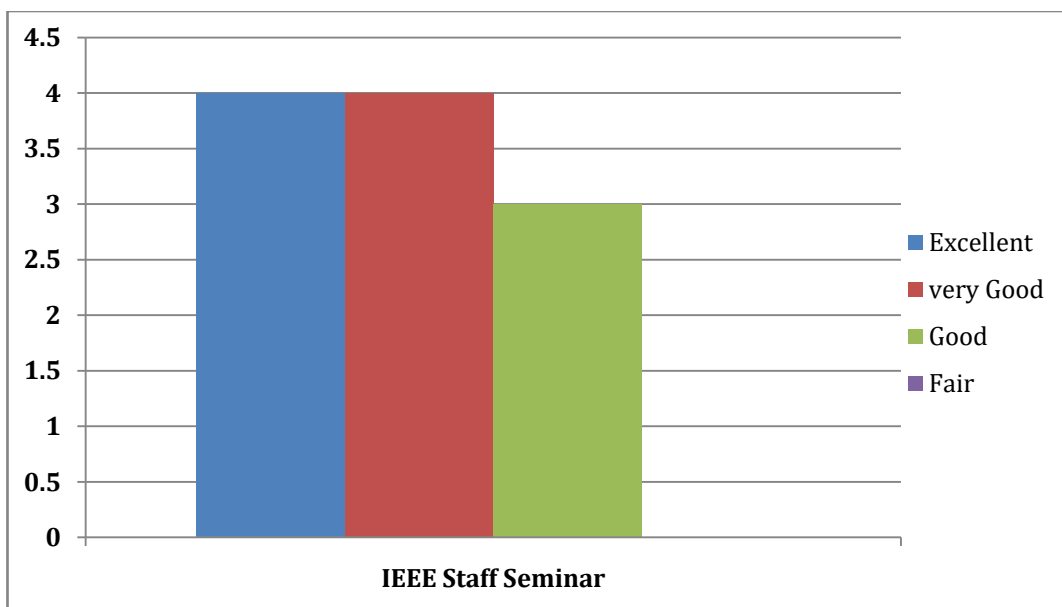
Conclusion:

In conclusion, our exploration of "Techno-Economic and Power System Optimization of a Renewable Rich Islanded Microgrid Considering Different Dispatch Strategies" highlighted the importance of selecting appropriate renewable energy technologies and integrating them based on specific geographic conditions. Comprehensive cost evaluations, strategic financial planning, and the role of incentives are essential for economic sustainability. We addressed the challenges of maintaining grid stability and reliability through advanced control systems, real-time monitoring, and robust energy management. Evaluating dispatch strategies such as load-following, demand response, and predictive dispatch, we noted the potential of artificial intelligence to optimize resource allocation. Practical examples and simulation studies demonstrated the necessity of context-specific solutions. Ultimately, the successful optimization of islanded microgrids requires an interdisciplinary approach combining technological innovation, economic planning, and strategic management to ensure sustainability, reliability, and a significant contribution to global renewable energy goals and carbon emission reduction. Continuous research, innovation, and collaboration will be vital in overcoming challenges and maximizing renewable energy potential in isolated settings. Thank you for your attention, and I look forward to any questions or discussions you may have.



Snapshot from Seminar

Feedback Analysis:



References:

1. Y. Ma, Y. Chen, X. Chen, F. Deng, and X. Song, "Optimal dispatch of hybrid energy islanded microgrid considering V2G under TOU tariffs," in Proc. ES Web Conf., vol. 107, 2019, pp. 1–6.

2. D. Datta, S. R. Fahim, S. K. Sarker, S. M. Muyeen, M. R. I. Sheikh, and S. K. Das, "A robust control method for damping and tracking of secondary network voltage of a PV based hybrid AC/DC microgrid," *Frontiers Energy Res.*, vol. 7, Nov. 2020, Art. no. 580840.
3. S. Mohamed, M. F. Shaaban, M. Ismail, E. Serpedin, and K. A. Qaraqe, "An efficient planning algorithm for hybrid remote microgrids," *IEEE Trans. Sustain. Energy*, vol. 10, no. 1, pp. 257–267, Jan. 2019.
4. B. Papari, C. S. Edrington, I. Bhattacharya, and G. Radman, "Effective energy management of hybrid AC–DC microgrids with storage devices," *IEEE Trans. Smart Grid*, vol. 10, no. 1, pp. 193–203, Jan. 2019.
5. J. Duan, Z. Yi, D. Shi, C. Lin, X. Lu, and Z. Wang, "Reinforcement learning-based optimal control of hybrid energy storage systems in hybrid AC–DC microgrids," *IEEE Trans. Ind. Informat.*, vol. 15, no. 9, pp. 5355–5364, Sep. 2019.
6. L. Ye, C. Zhang, Y. Tang, W. Zhong, Y. Zhao, P. Lu, B. Zhai, H. Lan, and Z. Li, "Hierarchical model predictive control strategy based on dynamic active power dispatch for wind power cluster integration," *IEEE Trans. Power Syst.*, vol. 34, no. 6, pp. 4617–4629, Nov. 2019.
7. Y. Jia, X. Lyu, P. Xie, Z. Xu, and M. Chen, "A novel retrospect inspired regime for microgrid real-time energy scheduling with heterogeneous sources," *IEEE Trans. Smart Grid*, vol. 11, no. 6, pp. 4614–4625, Nov. 2020.
8. W. Liu, P. Zhuang, H. Liang, J. Peng, and Z. Huang, "Distributed economic dispatch in microgrids based on cooperative reinforcement learning," *IEEE Trans. Neural Netw. Learn. Syst.*, vol. 29, no. 6, pp. 2192–2203, Jun. 2018.
9. G. Xiong, D. Shi, and X. Duan, "Multi-strategy ensemble biogeography based optimization for economic dispatch problems," *Appl. Energy*, vol. 111, pp. 801–811, Nov. 2013.
10. J. Ahmad, M. Tahir, and S. K. Mazumder, "Dynamic economic dispatch and transient control of distributed generators in a microgrid," *IEEE Syst. J.*, vol. 13, no. 1, pp. 802–812, Mar. 2019.


Faculty In-Charge


HOD/EEE


Principal



**DEPARTMENT OF ELECTRICAL & ELECTRONICS ENGINEERING
ACADEMIC YEAR 2023-24EVEN**

Internal IEEE Seminar- Report

Title of the seminar	: DC Micro-grids and Distribution Systems – A Research Perspective
Date	: 29.02.2024
Resource Person	: Dr. S. Vasantharaj, AP/EEE, KCE
Beneficiaries	: EEE Faculty Members –7
Venue	:EEE – Smart Classroom

On behalf of Department of EEE, IEEE Branch has organized Internal Seminar on “*DC Micro-grids and Distribution Systems – A Research Perspective*” for faculty members, Department of EEE on **29.02.2024**. The main objective of the internal seminar is to provide exposure to various research areas to our faculty members.

The following points were discussed during the session:

- Offer a comprehensive overview of the current state of research and development in DC micro-grids and their integration into distribution systems.
- Identify gaps and areas requiring further investigation or innovation within the field of DC micro-grids and distribution systems.
- Analyze recent technological advancements in DC micro-grid components, control systems, and integration techniques.
- Evaluate the performance of DC micro-grids in terms of reliability, stability, efficiency, and sustainability compared to traditional AC distribution systems.
- Investigate different control strategies employed in DC micro-grids, including hierarchical control, distributed control, and advanced control algorithms such as fuzzy logic and model predictive control.
- Examine methods and challenges associated with the integration of renewable energy sources, such as solar PV, wind, and hydroelectric, into DC micro-grids.
- Address interoperability issues between DC micro-grids and existing AC distribution systems, including standardization of interfaces and communication protocols.

- Assess the economic viability and cost-effectiveness of deploying DC micro-grids compared to conventional AC systems, including lifecycle cost analysis and economic modeling.
- Explore policy and regulatory frameworks governing the deployment and operation of DC micro-grids, including incentives, tariffs, and grid interconnection standards.
- Propose future research directions and areas of focus to advance the field of DC micro-grids and distribution systems, including interdisciplinary collaborations, experimental validations, and technology transfer initiatives.

Conclusion:

In conclusion, this research perspective sheds light on the dynamic landscape of DC micro-grids and their integration into distribution systems. Through a comprehensive review of current literature and technological developments, it underscores the transformative potential of DC micro-grid technology in shaping the future of energy distribution. While significant progress has been made, several key challenges and research gaps remain, necessitating further investigation and innovation. Addressing issues such as optimal system design, control strategies, renewable energy integration, and policy frameworks will be crucial for unlocking the full potential of DC micro-grids. Collaboration between academia, industry, and policymakers is essential to drive progress and facilitate the widespread adoption of DC micro-grid solutions. As we move forward, continued research efforts and interdisciplinary collaboration will play a pivotal role in realizing the vision of sustainable, resilient, and efficient energy distribution systems powered by DC micro-grids.





Snapshot from Seminar

Feedback Analysis:



References:

1. Saeed, Muhammad Hammad, Wang Fangzong, Basheer Ahmed Kalwar, and Sajid Iqbal. "A review on microgrids' challenges & perspectives." IEEE Access 9 (2021): 166502-166517.
2. Accetta, Angelo, and Marcello Pucci. "Energy management system in DC micro-grids of smart ships: Main gen-set fuel consumption minimization and fault compensation." IEEE Transactions on Industry Applications 55, no. 3 (2019): 3097-3113.

3. Al-Ismail, Fahad Saleh. "DC microgrid planning, operation, and control: A comprehensive review." IEEE Access 9 (2021): 36154-36172.
4. Zhangjie Liu, Mei Su, Yao Sun, Wenbin Yuan, Hua Han, and Jianghua Feng, "Existence and Stability of Equilibrium of DC Microgrid with Constant Power Load", IEEE Transactions on Power Systems 2018, 33(6): pp. 6999 – 7010.
5. H. Jedtberg, A. Pigazo, M. Liserre, and G. Buticchi, "Analysis of the robustness of transformerless PV inverter topologies to the choice of power devices", IEEE Transaction on Power Electronics 2017, 32(7): pp. 5248-5257.
6. H. F. Xiao, L. Zhang, and Y. Li, "A zero-voltage-transition HERIC-type transformerless photovoltaic grid-connected inverter", IEEE Transaction on Industrial Electronics 2017, 64(2): pp. 1222-1232.



Faculty In-Charge



HOD/EEE



Principal



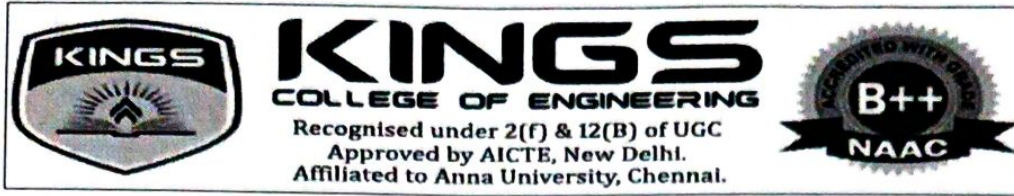
DEPARTMENT OF MECHANICAL ENGINEERING



ACADEMIC YEAR 2023 - 24

INTERNAL STAFF SEMINAR





**NUMBER OF PROFESSIONAL DEVELOPMENT /ADMINISTRATIVE
TRAINING PROGRAMS ORGANIZED BY THE INSTITUTION FOR TEACHING
AND NON TEACHING STAFF**

ACADEMIC YEAR 2023-2024

S. No	Dates (DD-MM-YYYY)	Title of the Professional Development Program Organized for Teaching Staff	No. of Participants
Academic Year 2023-2024 (ODD)			
1.	20.10.2023	Seminar on " Vacuum and Surface Hardening"	12
2.	04.11.2023	Seminar on " Recent Trends in Welding Technology"	12
3.	26.08.2023	Seminar on " Hydrogen Fuel Cell Vehicles"	12
4.	01.11.2023	Seminar on " FRP Composite Materials"	12
5.	25.10.2023	Seminar on " Plasma Arc Sintering and Process Parameters"	10
Academic Year 2023-2024 (EVEN)			
6.	14.05.2024	Seminar on " Electrical Vehicles"	12
7.	27.03.2024	Seminar on " The Technology Ahead in Mechanical Engineering"	12
8.	27.05.2024	Seminar on " Advanced Machining Processes"	12
9.	30.05.2024	Seminar on " Heat Treatment Processes"	11

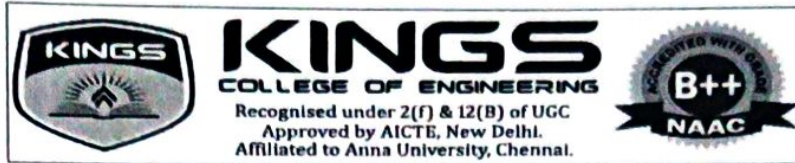
S.P.A.
12/8/24
Staff Incharge

T. Purushotham
14/8/24
HoD/Mech.

J. Manick
14/8/24
Principal

H.O.D
DEPARTMENT OF MECHANICAL ENGINEERING
KINGS COLLEGE OF ENGINEERING
PUNALKULAM

Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)
INTERNAL STAFF SEMINAR REPORT

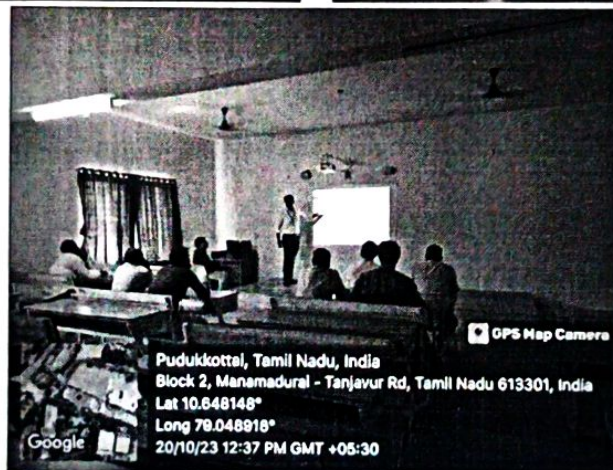
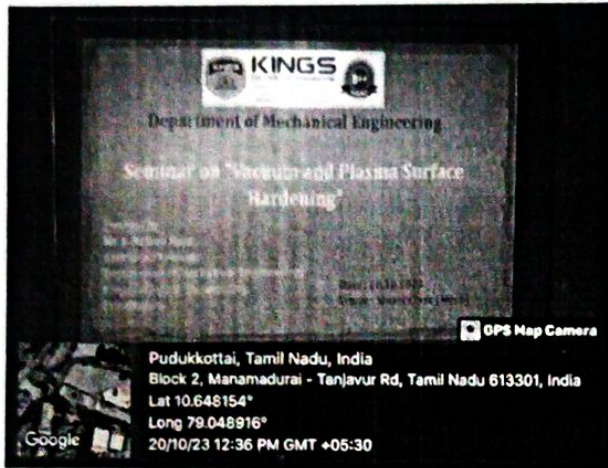
Date& time : 20.10.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "Vacuum and Surface Hardening"
Resource person : Mr. S. Nelson Raja
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Vacuum and Surface Hardening" for faculty members of the Mechanical Department on 20.10.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in materials and metallurgy.

The Following Points were Discussed During the Session:

- Thermally assisted surface hardening techniques have led to a surge in research efforts and industrial applications, with emphasis on strengthening of metallic materials with high work hardening, high strength and poor deformability.
- The common surface hardening techniques such as warm shot peening, warm laser shock peening and thermally assisted ultrasonic surface hardening are discussed. Also the development and working principle for each of the techniques are discussed.
- As compared with conventional surface hardening techniques, thermally assisted surface hardening techniques with optimum processing temperatures can further increase the surface and subsurface hardness, thickness of the hardening layer, fatigue life and wear resistance of mechanical components.
- Thermal energy can soften the materials, allowing plastic deformation to produce higher magnitude and deeper region of work hardening, allowing plastic deformation to produce higher magnitude and deeper region of work hardening.
- The coupled thermal-dynamic effect enables a broader design space for alloy hardening,

- The thermo mechanical treatment can also induce dynamic strain aging and dynamic precipitation in some metallic alloys, which leads to precipitation strengthening and enhanced stability of dislocations and compressive residual stress.



Snapshots of the Session

Chapters Discussed:

- Surface Hardening Techniques
- Metallurgical Properties Changing During the Vacuum and Surface Hardening.
- Benefits and Limitations.
- Research Scopes in Heat Treatment Techniques.

Outcomes:

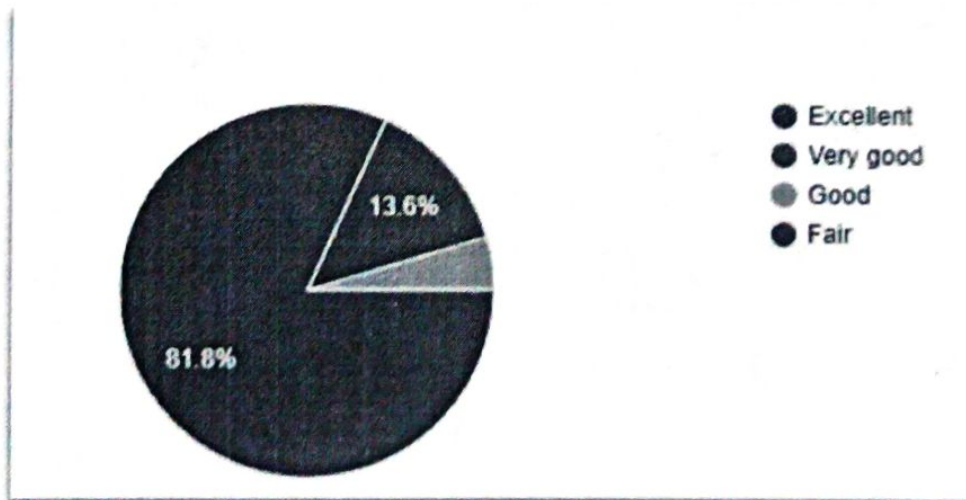
Upon listing of this seminar the participants can able to

- Understand the various types heat treatment techniques.
- Understand the concepts work hardening and surface hardening.
- Able to understand the concept of metallurgy in recent advancements.

References:

1. W.H. Peng, et all. "Effects of WC Grain Size on Surface Hardening of WC-10 Co Cemented Carbides by Pulsed Electron Beam Irradiation" - Vacuum, Volume 207, January 2023, 111613.
2. Gang Hee Gu, et all. "Unprecedented Bake Hardening Responses of Interstitial High-Entropy Alloy by Synergistic Effect with Lattice Distortion" - Materials & Design, Volume 233, September 2023, 112289.
3. Ziwei Qin et all. "Strain-Hardening, Impact Protective and Self-Healing Supramolecular Polyurethane Nanocomposites Enabled by Quadruple H-Bonding, Disulfide Bonds and Nanoparticles" - Chemical Engineering Journal, Volume 467, 1 July 2023, 143434.
4. Shixiong Wu et all." Microstructure and Mechanical Properties of Superficial Surface and Subsurface Layers in the Cutting of Hardened Steel Under Cryogenic Cooling" - Journal of Materials Processing Technology, Volume 322, September 2023, 118165.
5. Jun Liu et all. "Recent Development of Thermally Assisted Surface Hardening Techniques" - Advances in Industrial and Manufacturing Engineering - Volume 2, May 2021, 100006.

Feedback Analysis:

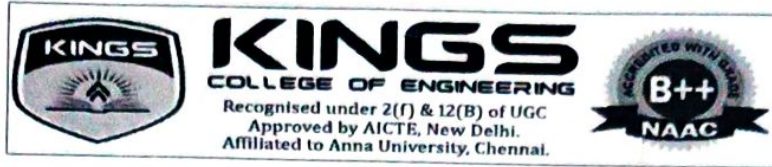


S.P.A.
Staff Incharge
25/10/2023

T. Pankhraj
HOD/MECH 25/10/23

J. Murali
Principal
25/10/2023

Good



**DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)**

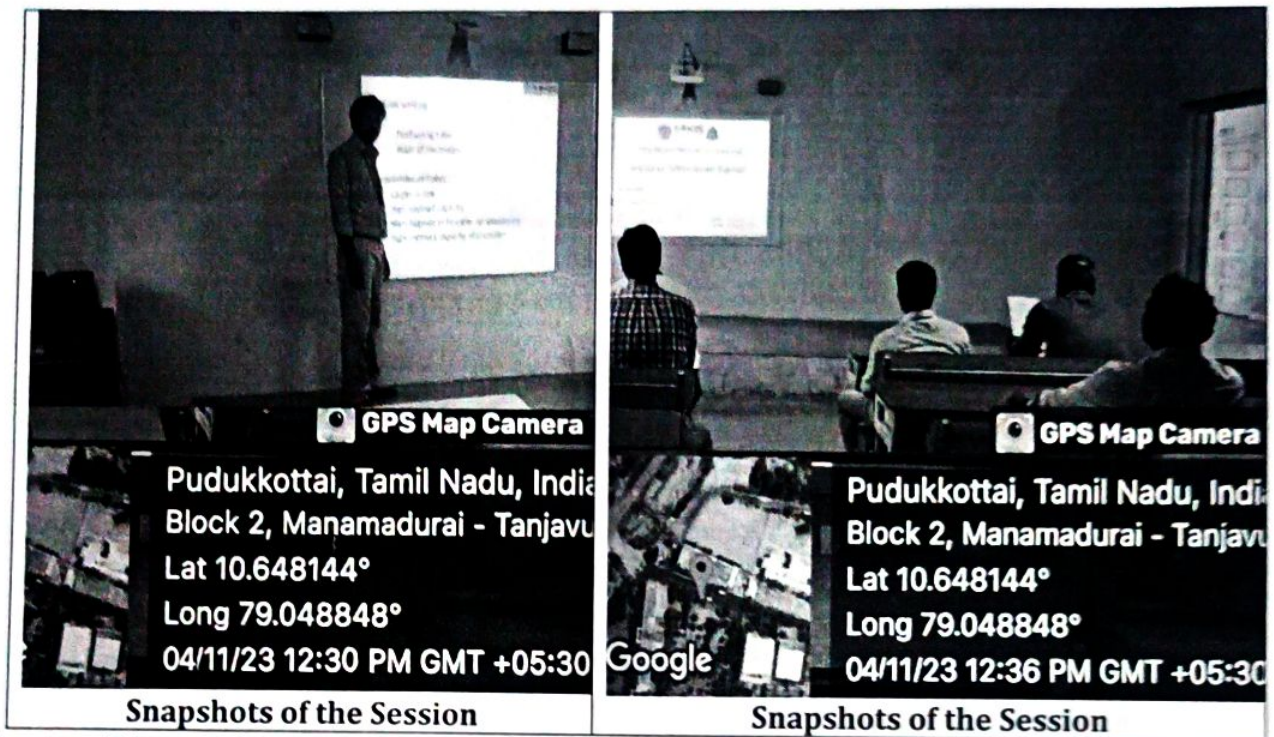
INTERNAL STAFF SEMINAR REPORT

Date& time : 04.11.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "Recent Trends in Welding Technology"
Resource person : Mr. M. Sakthivel
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Recent Trends in Welding Technology" for faculty members of the Mechanical Department on 04.11.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in welding and metallurgy.

The Following Points were Discussed During the Session:

- One of the newest advancements in welding involves the use of laser technology to instantly melt metal and fuse two pieces together.
- The laser beam is extremely accurate and enables fine welding even when dealing with extremely intricate parts.
- Laser welding is said to be as much as 10 times faster than typical MIG welding. At the same time, it doesn't require high heat or multiple passes.
- This makes it efficient for high-precision manufacturing processes such as those demanded by the medical and automotive industries.
- Industries are finding that robots are a highly cost-effective solution, especially in mass production since they are capable of working efficiently without human error.
- Robotic welding is best suited for short welds with repeatable and predictable tasks so that they don't have to be reprogrammed constantly.



Snapshots of the Session

Snapshots of the Session

Chapters Discussed:

- Metallurgical Properties Changing During Welding.
- Benefits and Limitations.
- Research Scopes in Welding Techniques.

Outcomes:

Upon listing of this seminar the participants can able to

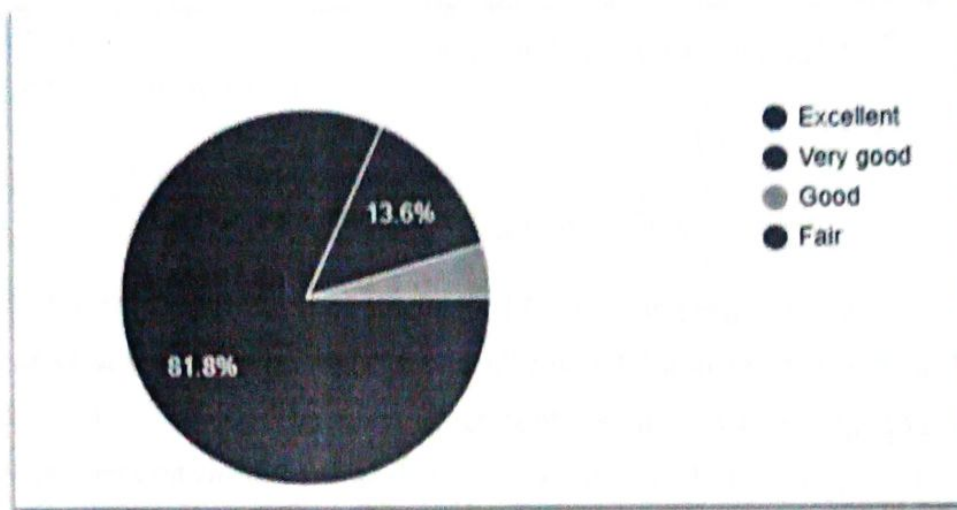
- Understand the various types of welding techniques.
- Understand the parameters of a specified welding procedure.
- Able to understand the concept of welding metallurgy.

References:

1. Shixiong Wu et al. "Microstructure and Mechanical Properties of Superficial Surface and Subsurface Layers in the Cutting of Hardened Steel Under Cryogenic Cooling" - Journal of Materials Processing Technology, Volume 422, September 2022, 118165.
2. Gang Hee Gu, et al. "Current Trends in Welding process and material improvement in effectiveness" - Materials & Design, Volume 133, September 2022, 112289.
3. W.H. Peng, et al. "Effects of WC Grain Size on Surface Hardening of WC-10 Co Cemented Carbides by Pulsed Electron Beam Irradiation" - Vacuum, Volume 217, January 2021, 112614.

4. Ziwei Qin et al. "Strain-Hardening, Impact Protective and Self-Healing Supramolecular Polyurethane Nanocomposites Enabled by Quadruple H-Bonding, Disulfide Bonds and Nanoparticles" - Chemical Engineering Journal, Volume 337, 10 July 2022, 143434.
5. Jun Liu et al. "Current Trend in Welding Process and Material" - Advances in Industrial and Manufacturing Engineering - 3, May 2022, 100006.

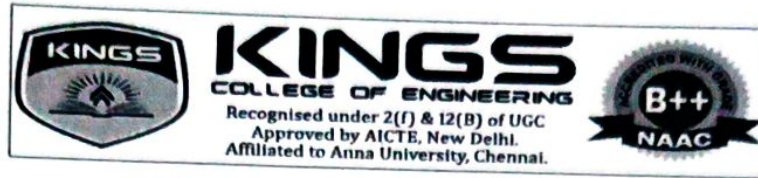
Feedback Analysis:



[Signature]
Staff Incharge 09/11/23

T. P. [Signature]
HOD/MECH 6/12/23

J. [Signature]
Principal 06/12/2023



**DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)**

INTERNAL STAFF SEMINAR REPORT

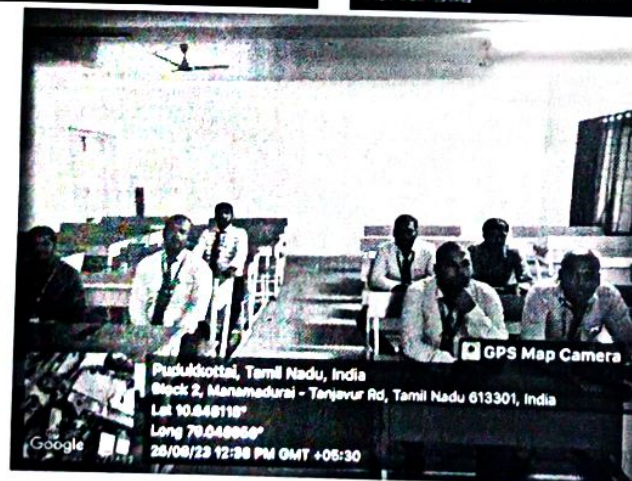
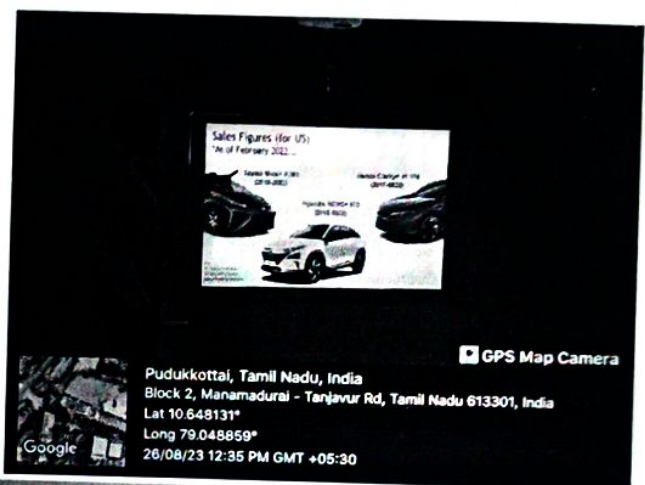
Date & time : 26.08.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "Hydrogen Fuel Cell Vehicles"
Resource person : Mr. H. Agilan
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Hydrogen Fuel Cell Vehicles" for faculty members of the Mechanical Department on 26.08.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in Electrical and Hydrogen vehicles.

The Following Points were Discussed During the Session:

- Fuel cell electric vehicles (FCEVs) are powered by hydrogen. They are more efficient than conventional internal combustion engine vehicles and produce no harmful tailpipe emissions.
- They only emit water vapor and warm air. FCEVs and the hydrogen infrastructure to fuel them are in the early stages of implementation.
- FCEVs use a propulsion system similar to that of electric vehicles, where energy stored as hydrogen is converted to electricity by the fuel cell.
- Unlike conventional internal combustion engine vehicles, these vehicles produce no harmful tailpipe emissions.
- FCEVs are fueled with pure hydrogen gas stored in a tank on the vehicle. Similar to conventional internal combustion engine vehicles, they can fuel in about 5 minutes and have a driving range of more than 300 miles.
- FCEVs are equipped with other advanced technologies to increase efficiency, such as regenerative braking systems that capture the energy lost during braking and store it in a battery.

- Major automobile manufacturers are offering a limited but growing number of production FCEVs to the public in certain markets, in sync with what the developing infrastructure can support.
- The most common type of fuel cell for vehicle applications is the polymer electrolyte membrane (PEM) fuel cell. In a PEM fuel cell, an electrolyte membrane is sandwiched between a positive electrode (cathode) and a negative electrode (anode). Hydrogen is introduced to the anode, and oxygen (from air) is introduced to the cathode.
- The hydrogen molecules break apart into protons and electrons due to an electrochemical reaction in the fuel cell catalyst. Protons then travel through the membrane to the cathode.



Snapshots of the session

Chapters Discussed:

- Hydrogen Basics
- Benefits & Considerations
- Stations
- Vehicles

Outcomes:

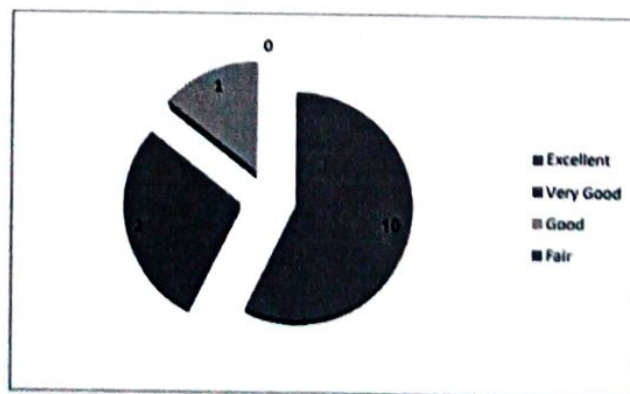
Upon listing of this seminar the participants can able to

- Understand the various types of fuels and their properties.
- Understand the concepts hydrogen vehicles and processing technology.
- Able to understand the concept of energy security and public health and environment.

References:

1. Yuanying Chi, et all. "Fuel-cycle based environmental and economic assessment of hydrogen fuel cell vehicles in China" - Energy, June 2023, Volume 282, 128773.
2. Wenyue Zhang, et all. "The alternative path for fossil oil: Electric vehicles or hydrogen fuel cell vehicles" - Journal of Environmental Management. Volume 341, May 2023, 118019.
3. Ting Shi, et all. "Experimental investigation on the start-stop performance of gas foil bearings-rotor system in the centrifugal air compressor for hydrogen fuel cell vehicles" - International Journal of Hydrogen Energy, June 2023.
4. Sidhartha Harichandan, Sanjay Kumar Kar. "An empirical study on motivation to adopt hydrogen fuel cell vehicles in India: Policy implications for stakeholders" - Journal of Cleaner Production, Volume 408, July 2023, 137198.
5. Pobitra Halder, et all. "Advancements in hydrogen production, storage, distribution and refuelling for a sustainable transport sector: Hydrogen fuel cell vehicles" - International Journal of Hydrogen Energy, June 2023.

Feedback Analysis:



[Signature]
Staff Incharge 31/8/23

T. Pankaj
HOD/MECH 31/8/23
H.O.D

J. Anand
Principal 05/9/23



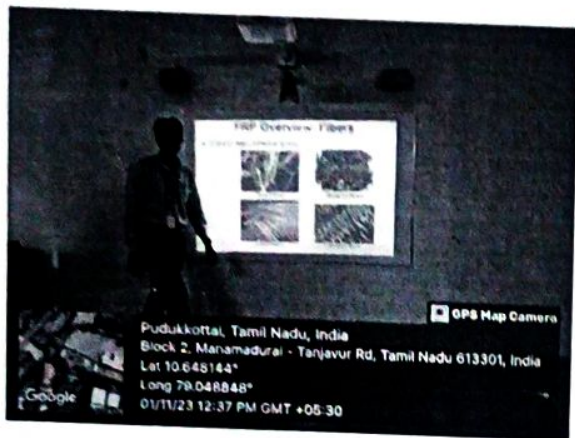
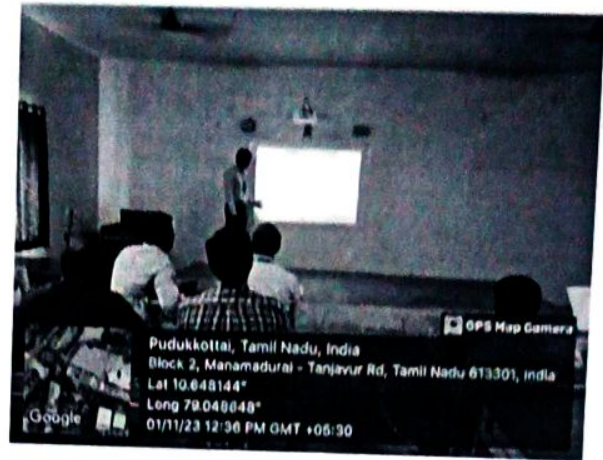
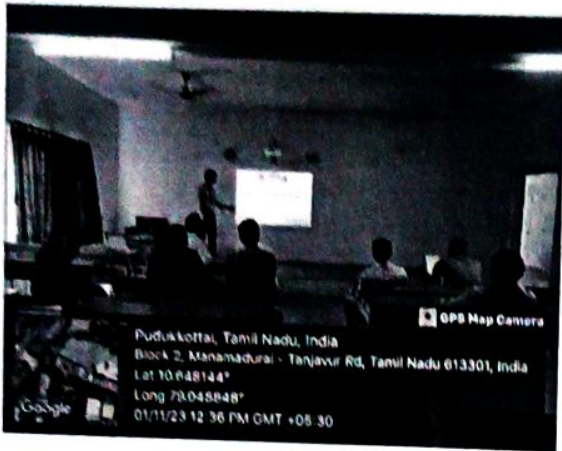
DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (ODD)
INTERNAL STAFF SEMINAR REPORT

Date& time : 01.11.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "FRP Composite Materials"
Resource person : Mr. K. Rajesh Kumar
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "FRP Composite Materials" for faculty members of the Mechanical Department on 01.11.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in materials and metallurgy.

The Following Points were Discussed During the Session:

- Fibre-reinforced polymer (FRP) , also Fibre-reinforced plastic , is a composite material made of a polymer matrix reinforced with fibres. The fibres are usually glass, carbon, or aramid, although other fibres such as paper or wood or asbestos have been sometimes used.
- FRP can be used in a wide range of applications but is commonly used in construction as panels. Used as a panel it can create strong walls and surfaces that are scratch-resistant and able to withstand high impacts. FRP is commonly used in schools, hospitals, recreational facilities and other industrial settings.
- High quality (FRP) products are created using high-quality polymer and fibers that enhance the surface's strength and durability.
- The fibre component of a FRP composite typically contributes the majority of the material's strength. The matrix's job is to contain the fibres and distribute forces among them. For instance, glass fibre, which often comes in the form of woven cloth or fibre mats, is stronger than steel for its weight. When mixed with epoxy resin, the resulting glass fibre composite is light, stiff, and robust.



Snapshots of the Session

Chapters Discussed:

- Fiber types, properties and applications.
- Advanced manufacturing techniques.
- Benefits and Limitations.
- Current Research Scopes in FRP composite materials.

Outcomes:

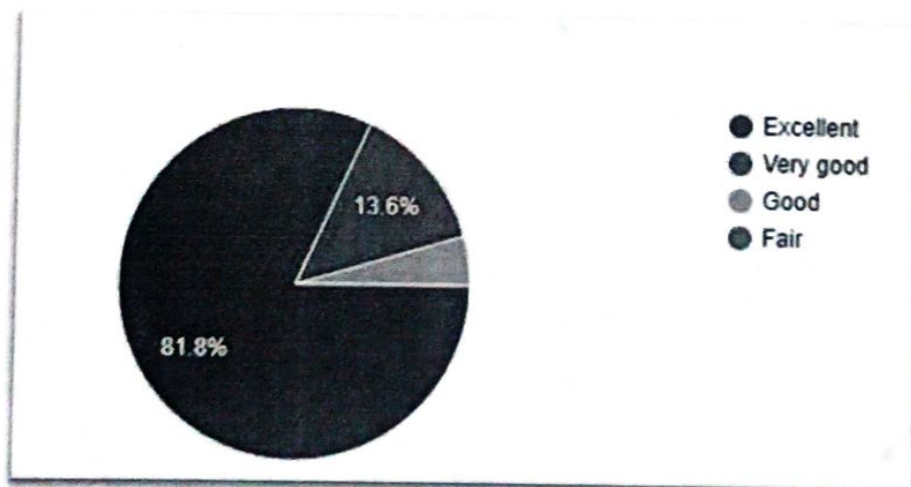
Upon listing of this seminar, the participants can able to

- Understand the various types FRP fabrication techniques.
- Understand the special fiber materials in special applications.
- Get awareness about current research scopes in FRP composites.

References:

1. Hollaway, L. C. (2010). A review of the present and future utilization of FRP composites in the civil infrastructure with reference to their important in-service properties. *Construction and building materials*, 24(12), 2419-2445.
2. Li, Y. F., Tsai, M. J., Wei, T. F., & Wang, W. C. (2014). A study on wood beams strengthened by FRP composite materials. *Construction and Building Materials*, 62, 118-125.
3. Günaslan, S. E., Karaşin, A., & Öncü, M. E. (2014). Properties of FRP materials for strengthening. *International Journal of Innovative Science, Engineering & Technology*, 1(9), 656-660.
4. Gaurav, A., & Singh, K. K. (2018). Fatigue behavior of FRP composites and CNT-Embedded FRP composites: A review. *Polymer Composites*, 39(6), 1785-1808.
5. Cenna, A. A., & Mathew, P. (2002). Analysis and prediction of laser cutting parameters of fibre reinforced plastics (FRP) composite materials. *International Journal of Machine Tools and Manufacture*, 42(1), 105-113.

Feedback Analysis:



J. Subing
6/12/23
Staff Incharge

T. P. Subing
6/12/23
HOD/MECH

J. Subing
06/12/2023
Principal



DEPARTMENT OF MECHANICAL ENGINEERING

ACADEMIC YEAR 2023-24 (ODD)

INTERNAL STAFF SEMINAR REPORT

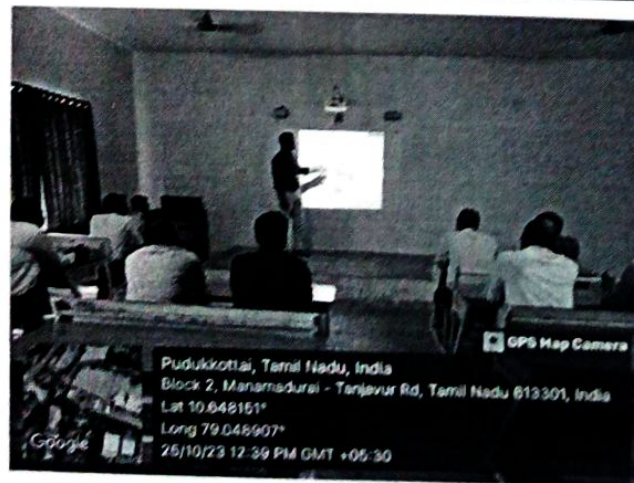
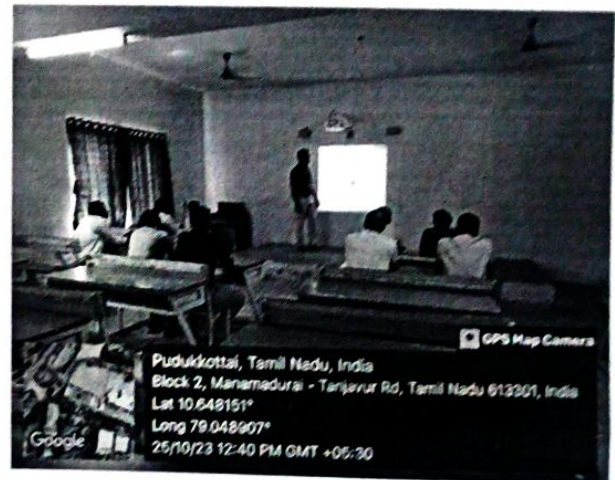
Date& time : 25.10.2023 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "Plasma Arc Sintering and Process Parameters"
Resource person : Dr.M.Melwin Jagadeesh Sridhar
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Plasma Arc Sintering and Process Parameters" for faculty members of the Mechanical Department on 25.10.2023 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in plasma arc sintering.

The Following Points were Discussed During the Session:

- The optimal SPS sintering parameters were a sintering temperature of 500 °C, a pressing pressure of 30 MPa, a sintering time of 12 min and a heating rate of 160 °C/min, which translated into a density of 2.71 g/cm³ and a microhardness of 38.61 HV [57,58,59,60,61].
- Spark Plasma Sintering (SPS) is a sintering technique used to fabricate dense and homogeneous bulk materials from powders. It involves the application of pulsed direct current (DC) and uniaxial pressure to the powder within a die.
- The process variables are involved in sintering are mostly thermodynamic variables, such as temperature, time, atmosphere, pressure, heating and cooling rate. Many previous sintering studies have examined the effects of sintering temperature and time on sinterability of powder compacts.
- There are three different heating techniques for pressureless sintering - constant-rate of heating (CRH), rate-controlled sintering (RCS), and two-step sintering (TSS). The ceramic microstructure and grain size will vary depending on the material and technique used.

- **Solid-State Sintering:** Powdered material is heated to a temperature just below the melting point. This bonds the particles together by atomic diffusion at the grain boundaries. **Liquid Phase Sintering:** Uses the addition of a small amount of a solvent liquid to the powder to induce low porosity and bonding.
- Spark plasma sintering, also known as plasma pressure compaction (P2C) sintering, equipment are commercially available now and are no longer limited to laboratory research work.
- Common process variables are flow, level, pressure, temperature, turbidity, chlorine, and oxygen levels.



Snapshots of the Session

Chapters Discussed:

- Copper and copper alloys are used to produce sintered metals.
- Sintered steel is produced using steel and steel alloys.
- Powder iron can be used to produce sintered iron.

Kings College of Engineering, Punalkulam

- Powders used in ~~metal sintering~~ includes: ~~Iron and Carbon Steels, Iron-Copper and Copper Steels, Iron-Nickel and Nickel Steels.~~
- FAST Sintering (or Field Assisted Sintering Technology), is a process that allows the production of more resistant and high-density materials from powders.

Outcomes:

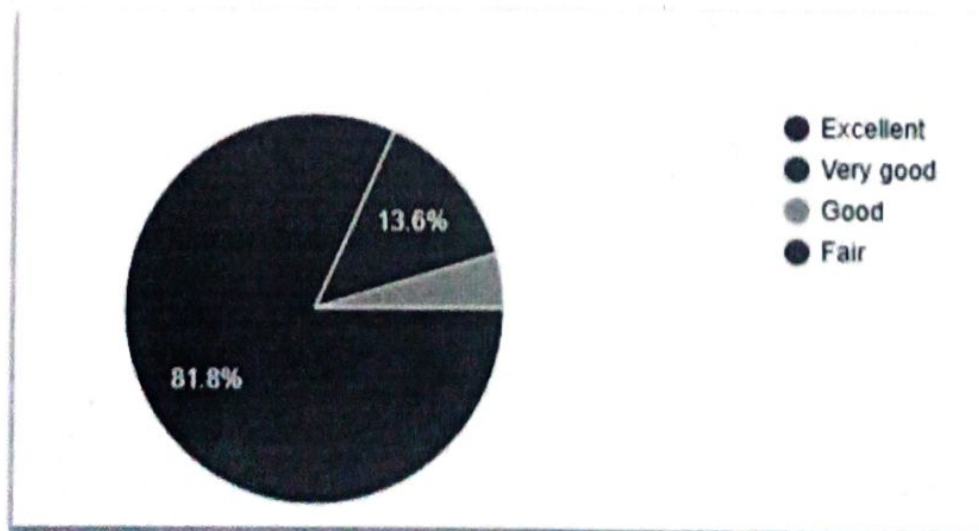
Upon listing of this seminar the participants can able to

- Understand sintering provides mechanical strength, eliminates pores, and increases the ceramic density.
- Understand the concepts and functioning of sintering.
- Able to understand the sintering temperature in recent advancements.

References:

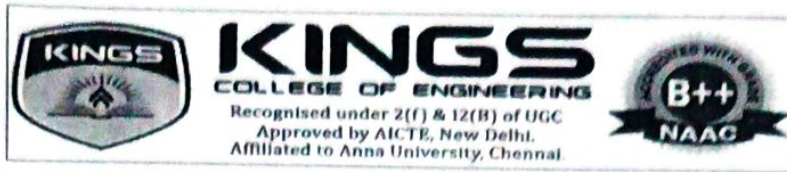
1. Tiwari D., Basu B. and Biswas K. 2009 Ceram. Inter. 35 699.
2. Grasso S., Sakka Y. and Maizza G. 2009 Sci. Technol. Adv. Mater. 10 053001.
3. Olevsky E. a. 1998 Mater. Sci. Eng. R Reports 23 41-100.
4. Hu C., Sakka Y., Tanaka H., Nishimura T. and Guo S. 2010 J. Euro. Ceram. Soc. 30 2625.
5. Kraft T. and Riedel H. 2004 J. Eur. Ceram. Soc. 24 345-361.

Feedback Analysis:



H. J. J.
25/10/23
Staff Incharge

T. P. J.
HOD/MECH 25/10/23



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)

INTERNAL STAFF SEMINAR REPORT

Date& time : 14.05.2024 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "Electric vehicles"
Resource person : **Mr. R.Rajadurai**
Assistant professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Electric vehicles" for faculty members of the Mechanical Department on 14.05.2024 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on recent technologies evolving in electric vehicles.

The Following Points were Discussed During the Session:

Mechanical engineering has always been at the forefront of technological innovation, driving progress in various automobile industries. With the rapid pace of technological advancement, new developments in mechanical engineering are continually emerging. This report aims to highlight some of the upcoming technologies in the field of automobile engineering.

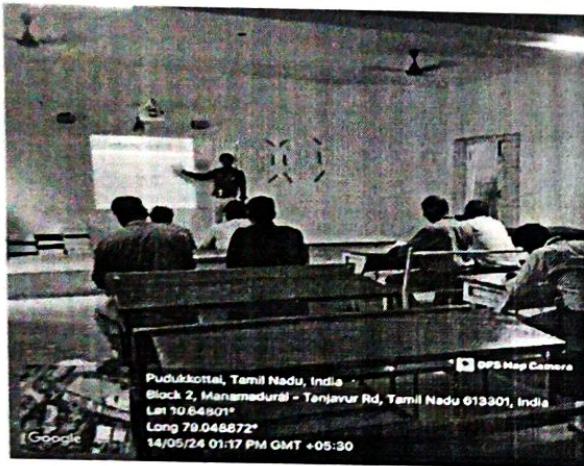
Market Growth: The EV market has been consistently growing globally. Various governments are offering incentives to both manufacturers and consumers to drive adoption. Additionally, advancements in battery technology are making EVs more affordable and practical for everyday use.

Environmental Impact: EVs have a significantly lower carbon footprint compared to traditional internal combustion engine vehicles. As the electricity grid becomes greener with more renewable energy sources, the environmental benefits of EVs continue to improve.

Technological Advancements: The technology behind EVs is rapidly advancing. This includes improvements in battery efficiency, charging infrastructure, and autonomous driving features. These advancements not only make EVs more attractive to consumers but also contribute to a more sustainable transportation ecosystem.

Challenges: Despite the progress, challenges remain. Infrastructure, particularly charging stations, needs to expand to accommodate the growing number of EVs on the road. Battery technology still faces limitations in terms of energy density, charging speed, and longevity, although research and development efforts are actively addressing these issues.

Overall, discussions about electric vehicles encompass a wide range of topics, reflecting their significance in the transition to a more sustainable transportation system.



Snapshots of the Session

Outcomes:

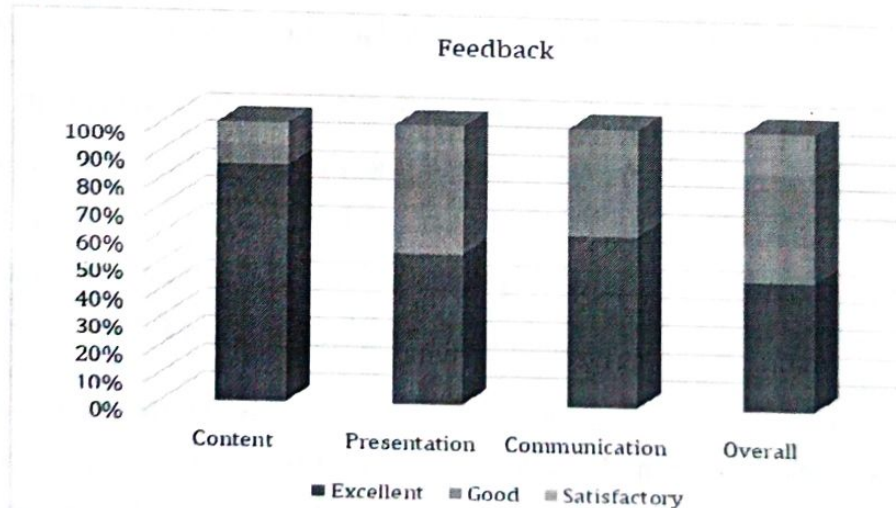
Upon listing of this seminar the participants can able to

- Understand the case studies and real-world applications of E-vehicles for different industries.
- Understand the basic difference between E-vehicles and hybrid vehicles.
- Know how the automation integration in automobile sectors that transforms traditional manufacturing paradigms into leading productivity, efficiency and safety, while also fostering innovation and skill development within the workforce.

References:

1. Hwang, Foo Shen, et al. "Review of battery thermal management systems in electric vehicles." Renewable and Sustainable Energy Reviews 192 (2024): 114171.
2. Nawaz, Muhammad Usman, Muhammad Salik Qureshi, and Shayan Umar. "Integration of Solar Energy Systems with Electric Vehicle Charging Infrastructure: Challenges and opportunity." Revista Espanola de Documentacion Cientifica 18.02 (2024): 1-18.
3. Saputra, Muhammad Candra, and Erna Andajani. "Analysis of Factors Influencing Intention to Adopt Battery Electric Vehicle in Indonesia." ADI Journal on Recent Innovation 5.2 (2024): 100-109.
4. Ullah, Irfan, et al. "Electric vehicles charging infrastructure planning: a review." International Journal of Green Energy 21.7 (2024): 1710-1728.
5. Kosuru, Venkata Satya Rahul, and Ashwin Kavasseri Venkitaraman. "Trends and challenges in electric vehicle motor drivelines-A review." International journal of electrical and computer engineering systems 14.4 (2023): 485-495.

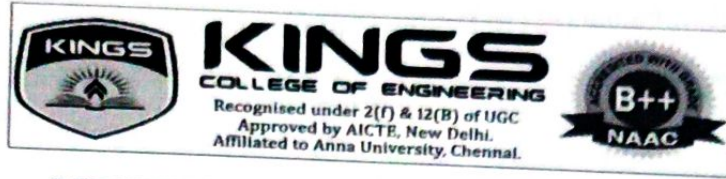
Feedback Analysis:



[Signature]
Staff In charge

[Signature]
HOD/MECH 20/6/24

[Signature]
20/6/2024
Principal



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)
INTERNAL STAFF SEMINAR REPORT

Date & time : 27.03.2024 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "The Technology ahead in Mechanical Engineering"
Resource person : Dr. S. Sabanayagam,
Associate Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "The Technology ahead in Mechanical Engineering" for faculty members of the Mechanical Department on 27.03.2024 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on recent technologies evolving in Mechanical Engineering.

The Following Points were Discussed During the Session:

Mechanical engineering has always been at the forefront of technological innovation, driving progress in various industries. With the rapid pace of technological advancement, new developments in mechanical engineering are continually emerging. This report aims to highlight some of the upcoming technologies in the field of mechanical engineering, along with their objectives and anticipated outcomes.

1. Additive Manufacturing (3D Printing):

Objective: The objective of additive manufacturing is to revolutionize traditional manufacturing processes by enabling the production of complex geometries with reduced material waste and lead times.

Outcomes: With advancements in 3D printing technology, engineers can expect increased design freedom, improved part performance, and enhanced customization capabilities. Additionally, additive manufacturing has the potential to decentralize production and reduce supply chain dependencies.

2. Artificial Intelligence (AI) in Design Optimization:

Objective: Integrating artificial intelligence into the design process aims to automate and optimize the creation of mechanical components and systems.

Outcomes: AI-driven design optimization tools can significantly reduce the time and resources required for product development. By leveraging machine learning algorithms, engineers can explore a broader design space, identify optimal solutions, and improve performance metrics such as efficiency, reliability, and durability.

3. Robotics and Automation:

Objective: The objective of robotics and automation is to enhance productivity, efficiency, and safety across various industrial sectors.

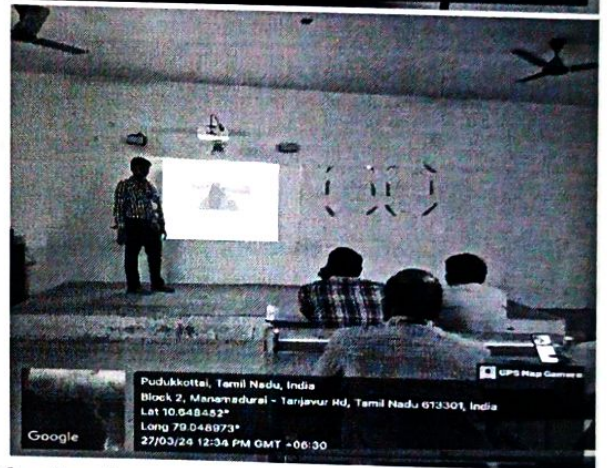
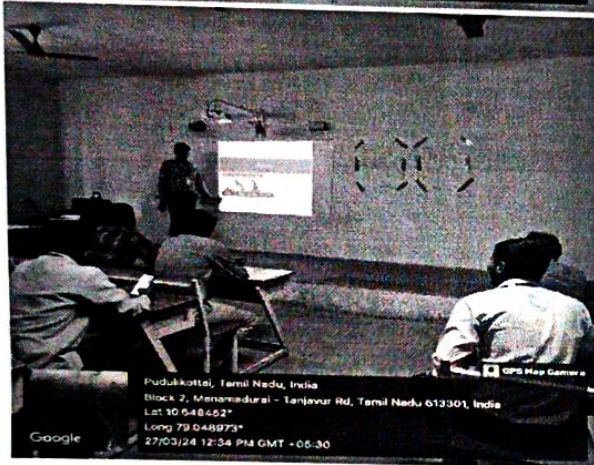
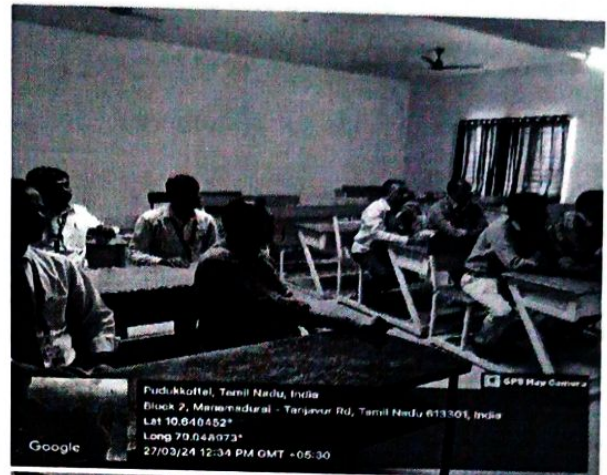
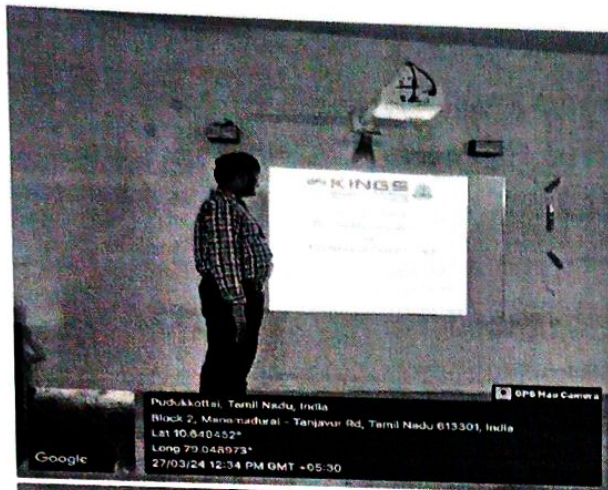
Outcomes: Advancements in robotics technology enable the deployment of autonomous systems for tasks ranging from manufacturing and assembly to inspection and maintenance. With increased reliability and flexibility, robotic solutions can streamline operations, minimize errors, and mitigate workplace hazards.

4. Sustainable Energy Technologies:

Objective: Sustainable energy technologies aim to address environmental concerns by reducing reliance on fossil fuels and minimizing carbon emissions.

Outcomes: Innovations in renewable energy systems, such as wind turbines, solar panels, and hydroelectric generators, contribute to the transition towards a more sustainable energy infrastructure. Additionally, advancements in energy storage technologies, such as battery systems and hydrogen fuel cells, facilitate the integration of renewable energy sources into existing grids.

The future of mechanical engineering is characterized by a convergence of advanced technologies aimed at addressing global challenges and driving innovation across industries. From additive manufacturing and artificial intelligence to robotics and sustainable energy, these advancements hold the promise of revolutionizing traditional practices, enhancing efficiency, and promoting sustainability. By leveraging these emerging technologies, mechanical engineers can continue to push the boundaries of what is possible, shaping a more prosperous and sustainable future.



Snapshots of the Session

Chapters Discussed:

- Additive Manufacturing.
- AI in design optimization.
- Robotics & Automation.
- Sustainable energy technologies.

Outcomes:

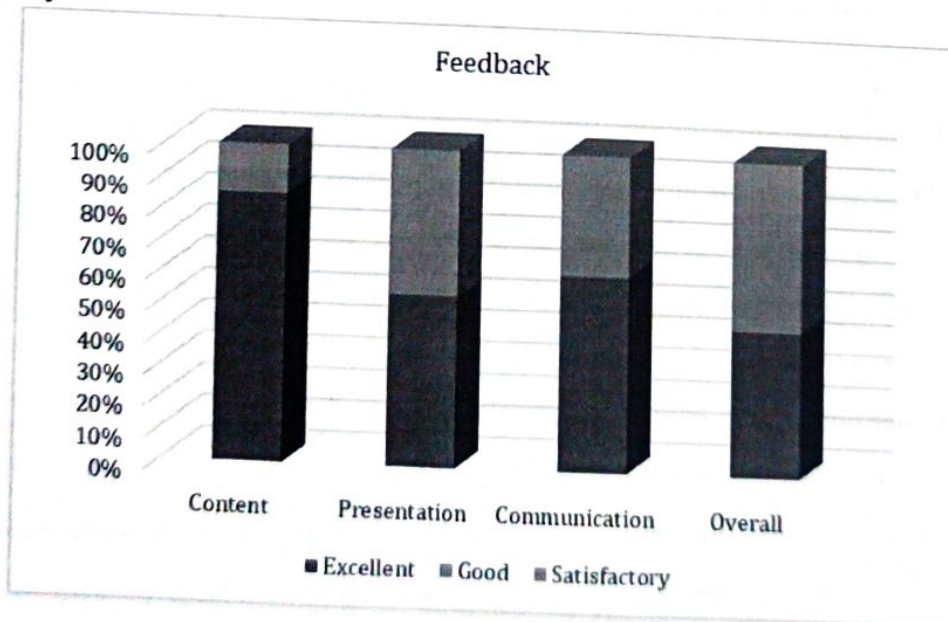
Upon listing of this seminar the participants can able to

- Understand the case studies and real-world applications of AM across different industries.
- Have valuable insights on how AI to revolutionize mechanical design processes by exploring advanced techniques, real-world case studies.
- Know how the robotics and automation integration in mechanical sectors that transforms traditional manufacturing paradigms into leading heightened productivity, efficiency, and safety, while also fostering innovation and skill development within the workforce.

References:

1. Journal Title: Robotics and Computer-Integrated Manufacturing
Citation: Fathi, Hamidreza, et al. "Integration of robotics and automation in manufacturing: Review and prospect." Robotics and Computer-Integrated Manufacturing, vol. 67, 2020, 101992.
2. Journal Title: IEEE Transactions on Automation Science and Engineering
Citation: Wang, Fei-Yue, et al. "Trends in robotics and automation in manufacturing." IEEE Transactions on Automation Science and Engineering, vol. 14, no. 2, 2017, pp. 948-956.
3. Journal Title: International Journal of Advanced Manufacturing Technology
Citation: Kusiak, Andrew, and Xiaoxia Huang. "Manufacturing intelligence: Trends in research and practice." International Journal of Advanced Manufacturing Technology, vol. 56, no. 9-12, 2011, pp. 1297-1310.
4. Journal Title: Robotics and Autonomous Systems
Citation: Sahin, Ferat. "A survey on industrial applications of robotic assembly." Robotics and Autonomous Systems, vol. 60, no. 4, 2012, pp. 541-552.
5. Journal Title: Journal of Manufacturing Systems
Citation: Xu, Xun, et al. "Robotics and automation in the food industry: Current status and future perspectives." Journal of Manufacturing Systems, vol. 53, 2019, pp. 95-106.

Feedback Analysis:



[Signature]
28/3/24
Staff In charge

T. Purdy
HOD/MECH
28/3/24

J. M...
28/3/2024
Principal

DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)
INTERNAL STAFF SEMINAR REPORT

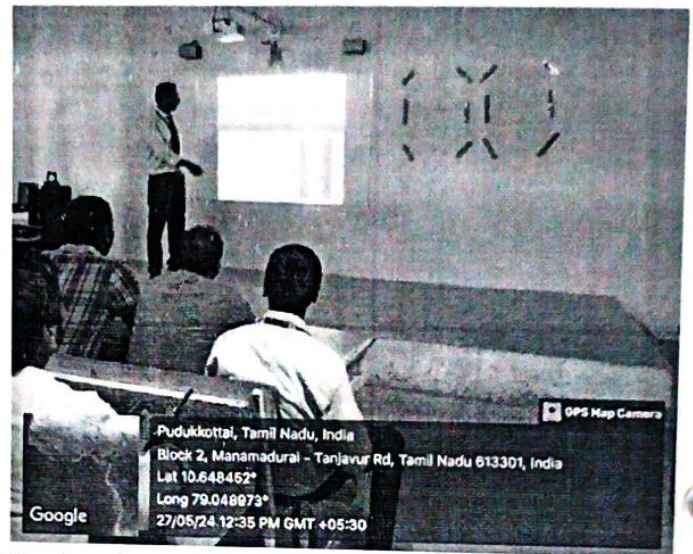
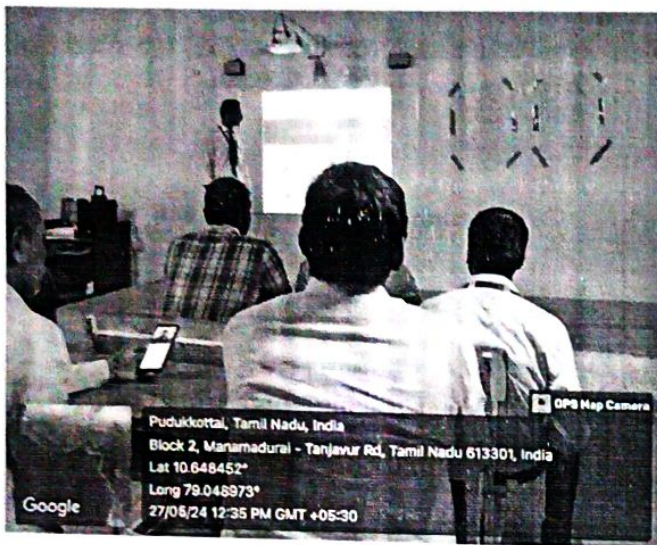
Date& time : 27.05.2024 & 12.30 P.M.
Venue : Smart Classroom, Mechanical Department, Block II
Topic : Seminar on "Advanced Machining Processes"
Resource person : Dr. R. Shankar
Associate Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Advanced Machining Processes" for faculty members of the Mechanical Department on 27.05.2024 at smart class room Mechanical department, Block II. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in materials and metallurgy.

THE FOLLOWING POINTS WERE DISCUSSED DURING THE SESSION:

- Advanced Machining processes are the material-removing processes different from conventional machining processes, in which a well-guided wedge-shaped tool removes the material in the form of chips by producing contact stresses. There are a variety of ways in which material is removed using these processes.
- During this seminar, various machining process are explained in detail. Chemical Machining, Electrical Discharge Machining & Electron Beam Machining.
- Chemical machining is the material removal process for the production of desired shapes and dimensions. It is done by selective or overall removal of material by a controlled chemical attack with acids or alkalies.
- Electrical Discharge machining is the process of metal removal from the work surface due to an erosion of metal caused by electric spark discharge between the two electrodes tool (cathode) and the work (Anode).

- Electron-beam machining (EBM) is a process where high-velocity electrons concentrated into a narrow beam that are directed towards the work piece, creating heat and vaporizing the material. EBM can be used for very precise cutting or boring of a wide variety of metals.



Snapshots of the Session

CHAPTERS DISCUSSED:

- Chemical Machining Process
- Electrical Discharge Machining Process
- Electron Beam Machining Process

OUTCOMES:

Upon listing of this seminar the participants can able to

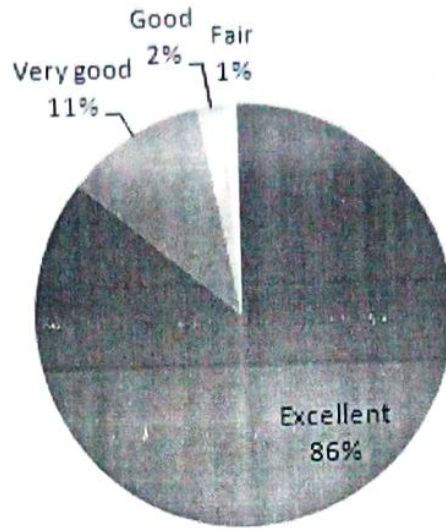
- Understand the various types of Chemical Machining Process..
- Understand the machining method of Electrical Discharge Machining Process
- Able to understand the characteristics of Electron Beam Machining Process..

REFERENCES:

1. W.H. Peng, et all. "Effects of WC Grain Size on Surface Hardening of WC-10 Co Cemented
2. Alting, Leo. (1982). Manufacturing Engineering Processes. Marcel Dekker, New York.
3. Amstead, B.H; et. al. (1987). Manufacturing Processes. John-Wiley and Sons, New York.
4. Armarego, E.J.A. and Brown, R.H. (1969), Machining of Metals. Prentice Hall, NJ.
5. Ashby, M.F; (1992). Materials Selection in Mechanical Design. Pergamon, New York.
6. Avitzur, B. (1983). Handbook of Metal Forming Processes. Wiley-Interscience, New York.

FEEDBACK ANALYSIS:

Feedback



R. [Signature]

Staff Incharge

T. Parbhany

HOD/MECH

*J. [Signature]
03/6/2024*

Principal



DEPARTMENT OF MECHANICAL ENGINEERING
ACADEMIC YEAR 2023-24 (EVEN)
INTERNAL STAFF SEMINAR REPORT

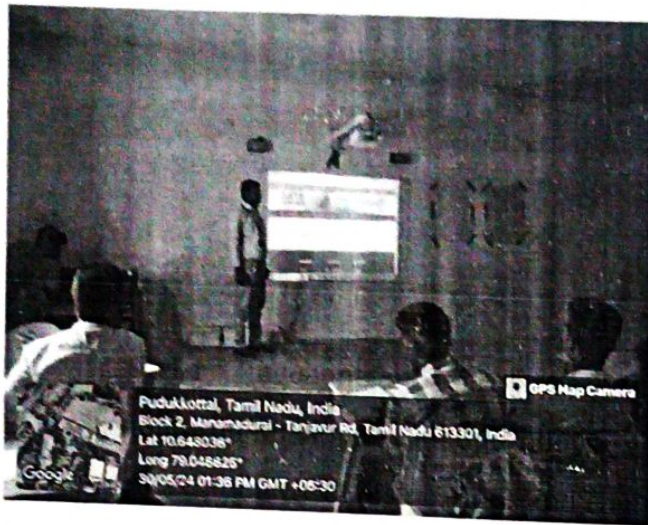
Date & time : 30.05.2024 & 12.30 P.M.
Venue : Department Smart Classroom
Topic : Seminar on "Heat treatment process"
Resource person : Mr. N. Magesh
Assistant Professor,
Mechanical Engineering,
Kings College of Engineering-Punalkulam.

On behalf of the Department of Mechanical Engineering organized an Internal Seminar on "Heat treatment process" for faculty members of the Mechanical Department on 30.05.2024 at smart class room. The main objective of the internal seminar is to provide exposure to our faculty members on various research areas in materials and metallurgy.

The Following Points were discussed during the Session:

- Thermally assisted surface hardening techniques have led to a surge in research efforts and industrial applications, with emphasis on strengthening of metallic materials with high work hardening, high strength and poor deformability.
- The common surface hardening techniques such as warm shot peening, warm laser shock peening and thermally assisted ultrasonic surface hardening are discussed. Also the development and working principle for each of the techniques are discussed.
- As compared with conventional surface hardening techniques, thermally assisted surface hardening techniques with optimum processing temperatures can further increase the surface and subsurface hardness, thickness of the hardening layer, fatigue life and wear resistance of mechanical components.
- Thermal energy can soften the materials, allowing plastic deformation to produce higher magnitude and deeper region of work hardening, allowing plastic deformation to produce higher magnitude and deeper region of work hardening.
- The coupled thermal-dynamic effect enables a broader design space for alloy hardening.

- The thermo mechanical treatment can also induce dynamic strain aging and dynamic precipitation in some metallic alloys, which leads to precipitation strengthening and enhanced stability of dislocations and compressive residual stress.



Snapshots of the Session

Chapters Discussed:

- Surface Hardening Techniques
- Metallurgical Properties Changing During the Vacuum and Surface Hardening.
- Benefits and Limitations.
- Research Scopes in Heat Treatment Techniques.

Outcomes:

Upon listing of this seminar the participants can able to

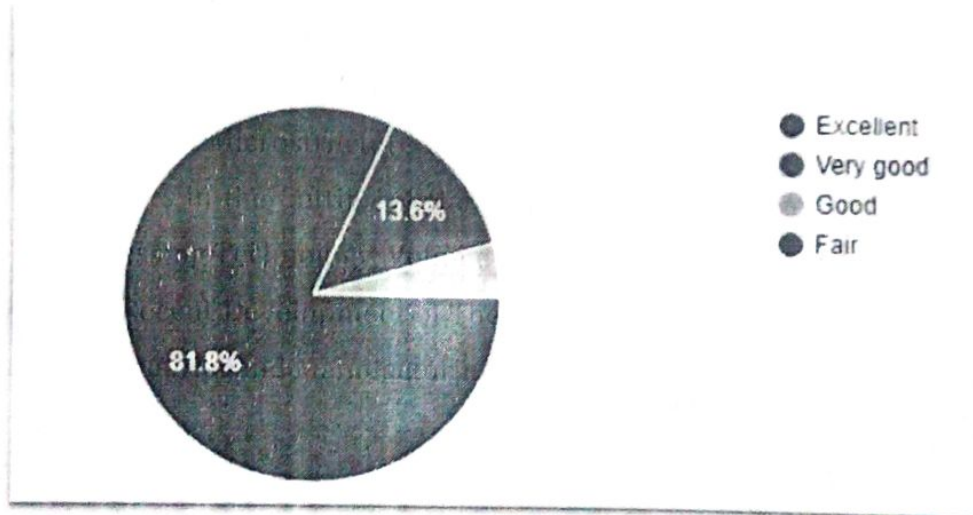
- Understand the various types heat treatment techniques.
- Understand the concepts work hardening and surface hardening.
- Able to understand the concept of metallurgy in recent advancements.

References:

1. W.H. Peng, et all. "Effects of WC Grain Size on Surface Hardening of WC-10 Co Cemented Carbides by Pulsed Electron Beam Irradiation" - Vacuum, Volume 207, January 2023, 111613.

2. Gang Hee Gu, et all. "Unprecedented Bake Hardening Responses of Interstitial High-Entropy Alloy by Synergistic Effect with Lattice Distortion" - Materials & Design, Volume 233, September 2023, 112289.
3. Ziwei Qin et all. "Strain-Hardening, Impact Protective and Self-Healing Supramolecular Polyurethane Nanocomposites Enabled by Quadruple H-Bonding, Disulfide Bonds and Nanoparticles" - Chemical Engineering Journal, Volume 467, 1 July 2023, 143434.
4. Shixiong Wu et all." Microstructure and Mechanical Properties of Superficial Surface and Subsurface Layers in the Cutting of Hardened Steel Under Cryogenic Cooling" - Journal of Materials Processing Technology, Volume 322, September 2023, 118165.
5. Jun Liu et all. "Recent Development of Thermally Assisted Surface Hardening Techniques" - Advances in Industrial and Manufacturing Engineering - Volume 2, May 2021, 100006.

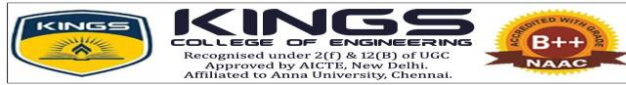
Feedback Analysis:



[Signature]
Staff Incharge

T. P. [Signature]
HOD/MECH

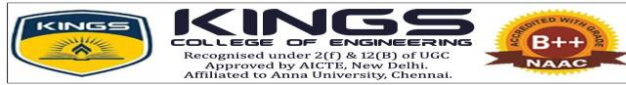
[Signature]
05/06/2024
Principal



DEPARTMENT OF TRAINING AND PLACEMENT

ACADEMIC YEAR 2023-2024





DEPARTMENT OF TRAINING AND PLACEMENT

ACADEMIC YEAR 2023-2024

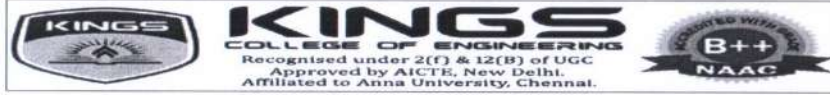
6.3.3. Number of Professional Development/Administrative Training Programs

S.NO	DESCRIPTION	BENEFICIARIES COUNT
1.	Training Program on "OFFICE MANAGEMENT" for Non- Teaching Staff Members	27

B. S. M.
Coordinator
5/4/24

S. S. S.
VP/Head- T&P

J. M. M.
Principal
05/4/2024.



DEPARTMENT OF TRAINING AND PLACEMENT

CIRCULAR

Ref No: KCE/T&P/PS01/23-24

03.04.2024

With the aim of enhancing the professional abilities of non-teaching staff members of various departments of this institute, we have planned to conduct a training program on 'OFFICE MANAGEMENT'. In this regard, all the **non-teaching staff members** are invited to attend the program without fail in the below-mentioned schedule:

Date: 04.04.2024

Venue: Pallava Hall

Name of the Resource Person: Dr.T.Devasenathipathi, MBA, PhD
Director, Chief Mentor, SR Training Academy, Coimbatore
Former Director of PPG Business School, Coimbatore.


Coordinator 3/4/24


VP/Head-T&P


03/4/2024
Principal

DEPARTMENT OF TRAINING AND PLACEMENT

ACADEMIC YEAR 2023-2024

Report on Professional Development Programme for Non Teaching Staff Members

The department of Training and Placement organized an office management program with the goal of improving the professional skills of non-teaching staff members at this institution. The programme helped a total of 27 participants. Dr. B. Suresh Babu, AP, T & P, welcomed the dignitaries and attendees and Dr. S. Sivakumar, VP/Head T & P, honoured the resource person. Dr. T. Devasenathipathi, Resource Person provided valuable insights on Office Management, highlighting the importance of interest, involvement, and updating relevant skills to complete the task efficiently. Finally, the programme was completed successfully with a vote of thanks by Dr. K. Sudhakar, AP, T & P. Feedback was collected from the participants.



Welcome Address by Dr. B. Suresh Babu



Honouring the Guest by Dr. S. Sivakumar



Resource person's Address to the participants

Latitude: 10.646764
Longitude: 79.048493
Elevation: 65.61228 m
Accuracy: 9.6 m
Time: 04-04-2024 15:21
Note: Kings College of Engineering

Powered by Notion

A view of the programme invitation



The poster features a blue and white color scheme. At the top left is a blue scribble logo. The top center contains the KINGS College of Engineering logo, which includes a shield with a sun and the text 'KINGS COLLEGE OF ENGINEERING'. Below this, it states 'Recognised under 2(f) & 12(B) of UGC', 'Approved by AICTE, New Delhi.', and 'Affiliated to Anna University, Chennai.'. To the right of the KINGS logo is a gold NAAC B++ accreditation seal. At the top right is the IEEE Madras Section logo with the number 'STB 16621'. The main title 'Professional Development Session on Office Management' is in a pink and white box. Below the title is a yellow spiral logo. The text 'Organized by Department of Training & Placement' is in blue. A photo of Dr. T. Devasenathipathi is shown next to his name and title. A clock icon indicates the date '04.04.2024', and a location pin icon indicates 'Pallava Hall'. The bottom of the poster has a blue banner with three names and titles: Dr. B. Suresh Babu (AP/MGMT Studies & TPO), Dr. S. Sivakumar (VP & Head/T&P), and Dr. J. Arputha Vijaya Selvi (Principal & IEEE SBC). A photo of a man in a suit looking at documents is on the right side of the poster.

KINGS
COLLEGE OF ENGINEERING
Recognised under 2(f) & 12(B) of UGC
Approved by AICTE, New Delhi.
Affiliated to Anna University, Chennai.

IEEE
Madras Section
STB 16621

Professional Development Session on
Office Management

Organized by
Department of Training & Placement

Resource Person
Dr. T. Devasenathipathi
OD consultant
Mentor, Siddha Vedha University,
Director, SR Tech Training Academy,
Coimbatore

04.04.2024
Pallava Hall

Dr. B. Suresh Babu
AP/MGMT Studies & TPO

Dr. S. Sivakumar
VP & Head/T&P

Dr. J. Arputha Vijaya Selvi
Principal & IEEE SBC

B. Suresh Babu
Coordinator
5/4/24

S. Sivakumar
VP/Head- T&P

J. Arputha Vijaya Selvi
05/4/2024
Principal

INTERNAL QUALITY ASSURANCE CELL
Academic Year 2023-24

26.12.23

FDP Report

2 Day Faculty Development Programme titled “Challenges, Innovations and Opportunities in current scenario

Empowering faculty members for engaged learning, Internal Quality Assurance Cell organized **2 Day Faculty Development Programme titled “Challenges, Innovations and Opportunities in current scenario” during 21.12.23 and 22.12.23.**

FDP was structured covering the following sessions aiming at a holistic development of faculty members, equipping them to handle challenges, innovate teaching methodologies, and create a positive impact in the current educational scenario.

The event addressed critical themes, including positive thinking, role modeling, presentation skills, student engagement, confidence building, voice modulation, and teacher-student relationships. The sessions were designed to inspire educators to embrace innovation and adapt to the changing educational landscape.

The FDP aimed to:

- Equip educators with skills to foster positive thinking and confidence.
- Enhance their presentation style and communication skills.
- Enable them to understand and address the diverse needs of students.
- Encourage the identification and nurturing of students' hidden talents.
- Strengthen the teacher-student relationship.

FDP was inaugurated by Dr.J.ArputhaVijayaSelvi, Principal. Dr.R.Rajendran, Secretary delivered presidential address, felicitated by Dr.S.Sivakumar Vice-Principal. FDP highlights were presented by Dr.K.Abhirami, ASP/CSE, IQAC Coordinator. Participants were welcomed by Mr.K.Arun, AP/Civil, Dy.IQAC Coordinator.



Inaugural Session – Dr.J.ArputhaVijayaSelvi, Principal inaugurated FDP. On stage Vice-Principal, Secretary, IQAC Coordinator (L to R)

Day 1: Personal and Professional Development (21.12.23)

The first day focused on self-improvement and professional growth.

Session 1: Importance of Positive Thinking

The programme began with an interactive session led by Mr.K.Arun, AP-Civil, who emphasized the significance of maintaining a positive outlook. The session explored techniques for stress management and resilience building.

Session 2: Being Good Role Models

Ms.R.Sugantha Lakshmi, AP/CSE, highlighted the importance of educators as role models. Practical examples and real-life case studies were used to demonstrate how personal integrity and ethical behavior influence students.



Mr.K.Arun Dy.IQAC Coordinator – Session 1 – Participant are prompted for activity

Session 3: Personal Presentation Style

Session on enhancing personal presentation was conducted by Ms.D.Vennila AP/CSE Dr.K.Abhirami, AP/CSE. Topics included professional attire, confident communication, and impactful public speaking.

Session 4: Voice Modulation and Body Language

This session, led by focused on improving verbal and non-verbal communication. Participants learned techniques to effectively modulate their voice and use body language to engage students.



Session 5 :Dr.K.Abhirami, IQAC Coordinator during interaction

Day 2: Student Engagement and Relationship Building(22.12.23)

The second day centered on understanding and addressing the needs of students.

Session 5: Understanding Different Types of Students

Dr.K.Abhirami, AP/CSE provided insights into various student learning styles and behavioral traits. Strategies for fostering inclusivity and catering to diverse needs were discussed.

Session 6: Encouraging Hidden Talents of Students

This session, facilitated by, focused on identifying and nurturing students' unique talents. Activities included brainstorming innovative teaching techniques to unlock potential was handled by Mr.S.R.Karthkeyam, AP/EEE



Participant Role Play

Session 7: Confidence Building

Mr.S.Nelson Raja, AP/Mech conducted a dynamic session on boosting confidence among educators and students. Practical tips and role-playing exercises were used to foster self-assurance.

Session 8: Teacher-Student Relationship

The concluding session addressed the dynamics of building trust and maintaining professional boundaries with students. Dr.B.SureshBabu/T&P shared strategies to create an empathetic and supportive learning environment.



Snapshot of Participant activity time

Feedback and Reflections

Participants expressed their appreciation for the thoughtfully curated sessions and the expertise of the speakers. Many highlighted the relevance of the topics and the interactive format of the sessions, ICT tools used which encouraged active participation and idea-sharing.



View of Participants during Valedictory Function



Participants receiving certificates from Principal



Organizing Committee - IQAC Team

Participants were given special awards under various titles - Best Performer, Best Team, Mr.Perfect, Ms.Perfect etc. Vote of Thanks was presented by Ms.D.Vennila, AP/ECE.

K. Adarsh

IQAC COORDINATOR

J. Muthu

PRINCIPAL

Principal
Kings College of Engineering
(Autonomous)
Punalkulam - 613 303